11.-12. MAREC 2021, LAŠKO, SLOVENIJA

6. Mednarodni Kongres Medicinskih izvedencev

ZBORNIK PREDAVANJ

11. - 12. MAREC 2021

Obravnavane teme:

- Ortopedija
- Fibromialgija
- Poklicna in zaposlitvena rehabilitacija

Zavod za zdravstveno zavarovanje Slovenije

ZIZRS
Združenje izvajalcev zaposlitvene rehabilitacije v Republiki Sloveniji

THERMANA

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Oblikovanje:
Design:
Mitja Železnikar, Diatonica Studio

Izdelal in založil:
Publisher:
Zavod za zdravstveno zavarovanje
Slovenije (ZZZS)
Miklošičeva 24
1000 Ljubljana
Slovenija

Leto izdaje:
Year of publication:
Ljubljana, Marec/March 2021

URL do spletne izdaje zbornika: www.6mkmis.com

ČASTNI POKROVITELJ/HONORARY SPONSORS

REPUBLIKA SLOVENIJA
MINISTRSTVO ZA DELO, DRUŽINO, SOCIALNE ZADEVE IN ENAKE MOŽNOSTI

REPUBLIKA SLOVENIJA
MINISTRSTVO ZA ZDRAVJE

ORGANIZATORJI/ORGANIZERS

ZAVOD ZA ZDRAVSTVENO ZAVAROVANJE SLOVENIJE

ZAVOD ZA POKOJNINSKO IN INVALIDSKO ZAVAROVANJE SLOVENIJE

ZDRUŽENJE IZVAJALCEV ZAPOSLITVENE REHABILITACIJE SLOVENIJE

THERMANA LAŠKO d. d.

Kataložni zapis o publikaciji (CIP)
pripravili v Narodni in univerzitetni knjižnici v Ljubljani

COBISS.SI-ID=54636291

ISBN 978-961-6327-32-9 (pdf)

VSEBINA

Predgovor

Pred vami je zbornik 6. mednarodnega kongresa medicinskih izvedencev Slovenije, ki je 11. in 12. marca 2021 potekal v Laškem in je z leti prerasel v tradicionalno srečanje strokovnjakov s področja medicinskega izvedenstva in zavarovalniške medicine, pa tudi drugih, ki so v Sloveniji povezani s to dejavnostjo. Ponosni smo na to.

Osrednji strokovni dogodek s področja odločanja o upravičeni zadržanosti od dela, invalidnosti in njeni oceni, ter vrnitvi na delo organizirajo Zavod za zdravstveno zavarovanje, Zavod za pokojninsko in invalidsko zavarovanje, Združenje izvajalcev zaposlitvene rehabilitacije Slovenije in Thermana Laško d. o. o. vsaki dve leti. Zaradi zagotavljanja varnosti za udeležence v času razglašene epidemije COVID-19 je kongres letos v celoti potekal kot spletni dogodek.

V ospredju sta bili strokovni temi ortopedije in fibromialgije ter poklicna in zaposlitvena rehabilitacija. Predstavljene so bile novosti zdravljenja in napredek pri rehabilitaciji bolnikov, ter kako vse to vpliva na možnosti zgodnjega in uspešnega vračanja na delo. Prispevki združenja izvajalcev zaposlitvene rehabilitacije dodajajo vpogled v možnosti ponovne vključitve invalidnih oseb v delovni proces in s tem tudi zagotavljanja njihove socialne varnosti. Na kongresu je aktivno sodelovalo več kot 50 predavateljev, tudi iz tujine. Zaradi spletne izvedbe dogodka pa tokrat ni bilo posterjev.

Kongres je namenjen v prvi vrsti zdravnikom, ki delajo na področju medicinskega izvedenstva in zavarovalniške medicine, predvsem vodenja odsotnosti z dela zaradi bolezni ali poškodbe, ocenjevanja delovne sposobnosti in invalidnosti ter spremljanja poteka zdravljenja v tem kontekstu. Zato je zanimiv predvsem za zdravnike specialiste družinske/splošne medicine, zdravnike s področja sodnega izvedenstva, medicine dela, prometa in športa ter poklicne rehabilitacije. Pa tudi za strokovnjake s področja socialne varnosti, poklicne in zaposlitvene rehabilitacije in vrnitve na delo.

Medicinsko izvedenstvo in zavarovalniška medicina je nova interdisciplinarna medicinska stroka, ki se je oblikovala na delovnih mestih zdravnikov v Zavodu za zdravstveno zavarovanje Slovenije in Zavodu za pokojninsko in invalidsko Slovenije in si utira svojo pot. Sekcija za medicinsko izvedenstvo in zavarovalniško medicino Slovenskega zdravniškega društva je že izvedla prvo sistematično izobraževanje s tega področja, ki je priznano kot posebna znanja Slovenskega zdravniškega društva. Pomemben korak pri oblikovanju stroke je s tem narejen, ostajajo pa odprta vprašanja formalne umestitve v zdravstvenem sistemu, kot na primer ureditev tega področja z zakonodajo. Take spremembe bodo pripomogle k hitrejšemu razvoju in večjemu zanimanju zdravnikov za to pomembno področje dela. Kongres medicinskih izvedencev prispeva k povezovanju strokovnjakov s tega področja, kontinuiteti in oblikovanju poenotene doktrine odločanja na različnih področjih medicine, pa tudi k prepoznavnosti in uveljavitvi te stroke doma in v tujini.

Vabljeni k branju, prepričajte se sami o raznovrstnosti in praktični uporabnosti te nove veje medicine.

mag. **Jana Mrak,** dr. med., predsednica Strokovnega odbora

Zavarovalni sistem in ocenjevanje invalidnosti na Nizozemskem

Avtor: Annette E. de Wind, dr. med., generalna sekretarka združenja EUMASS, Nizozemska

Ključne besede: ocenjevanje invalidnosti na Nizozemskem

Na Nizozemskem je zavarovalniška medicina široka specializacija v sklopu socialne medicine, ki se osredotoča na delo in zdravje ob upoštevanju zakonodaje socialnega zavarovanja.

Najprej bosta na kratko predstavljena nizozemska zakonodaja in sistem socialnega zavarovanja s poudarkom na invalidske programe.

Posledično se bodo obravnavale zadeve na temo odsotnosti, ukrepov in vrnitve na delo. S poudarkom na to, kaj zavarovanci še vedno lahko počnejo kljub njihovim funkcionalnim omejitvam, je potrebno zagotoviti pravočasni in ustrezni pristop k odsotnosti in ponovni integraciji, da se funkcionalnost zaposlenega čim hitreje in v največji možni meri povrne, s tem pa tudi prepreči dolgoročna invalidnost. Če to ni mogoče, se ocenijo prizadevanja ponovne integracije, čemur sledi ocena invalidnosti.

Podrobneje bo obravnavana ta ocena na področju zavarovalniške medicine, kjer zdravnik izvedenec oceni preostalo funkcionalno zmožnost pritožnika.

Zavarovalni sistem in ocenjevanje invalidnosti v Belgiji

Avtor: dr. **Jean-Pierre baron Schenkelaars,** dr. med., predsednik združenja EUMASS, Belgija

Ključne besede: invalidsko zavarovanje (v Belgiji), zdravstveni skladi, (belgijska) socialna varnost, zdravstveni svetovalci, ocena invalidnosti (v Belgiji)

Belgija je zvezna država, ki se razprostira na 30.510 km2 in ima 11,46 milijona prebivalcev z gostoto poseljenosti 323 prebivalcev na km2. Ima tri jezike (nizozemščina, francoščina in nemščina) in njen BDP je 373 milijarde EUR.

Bismarckov sistem socialne varnosti je solidarnostno naravnan, do 62 % je financiran na podlagi prispevkov delavcev in delodajalcev. Pokriva 6 glavnih sektorjev: zdravstveno in invalidsko zavarovanje, poklicne bolezni, delovne nezgode, zavarovanje za primer brezposelnosti, pokojnine in družinske dodatke.

Belgijsko obvezno zdravstveno in invalidsko zavarovanje pokriva 99 % prebivalstva. Temelji na modelu soodločanja in konsenza, ki vključuje zdravstvene sklade, ponudnike zdravstvenih storitev, delodajalce in vlado. Izbira ponudnika zdravstvenih storitev je prostovoljna. Osebni zdravniki in specialisti so neodvisni.

Invalidske pokojnine in ocene ureja zakon o zdravstvenem in invalidskem zavarovanju (1994). Nacionalni inštitut za zdravstveno in pokojninsko zavarovanje (NIHDI), je odgovoren za implementacijo invalidskega zavarovanja v sodelovanju s sedmimi različnimi vzajemnimi zdravstvenimi skladi (t. i. »mutuelle«). Osebe, ki prebivajo v Belgiji, si morajo izbrati enega od 7 vzajemnih zdravstvenih skladov. Izbira je prostovoljna.

Zdravstveni svetovalci pri zdravstvenih skladih so odgovorni za spremljanje delovne nezmožnosti in za ponovno vključevanje oseb v sodelovanju z multidisciplinarnimi ekipami (medicinske sestre, fizioterapevti, psihologi, delovni terapevti, itd.) pod njihovim nadzorom. Odločitev zdravstvenih svetovalcev je za zavarovance obvezujoča.

Glede na to, da delovna nezmožnost ni le medicinski problem, temveč je mnogovrstne narave, se ocenjevanje invalidnosti v Belgiji od leta 2007 sooča s spremembo paradigme, kjer prehajamo iz zavarovalniške logike (Bismarck) v terapevtsko logiko: ne preverjamo več, ali so ljudje izgubili dovolj delovne zmožnosti, da bi bili upravičeni do nadomestila, temveč se osredotočamo na njihovo preostalo delovno zmožnost z namenom ponovne vključitve v delovni proces, šele nato nastopi nadomestilo, če je potrebno.

Najnovejše informacije o sindromu fibromialgije

Avtor: prof. dr. **Piercarlo Sarzi-Puttini,** dr. med, spec. revmatologije,
Oddelek za revmatologijo, Univerzitetna bolnišnica L Sacco, Milano, Italija

Fibromialgija oz. sindrom fibromialgije je bolezensko stanje, za katero je značilna razširjena bolečina in drugi simptomi, kot so utrujenost, motnje spanja, avtonomne neobičajnosti in nevrokognitivne težave. Pacienti običajno trpijo tudi za sindromom regionalne bolečine, kot je npr. sindrom razdražljivega črevesja in migrene, kot tudi motnje v razpoloženju, npr. anksioznost in depresija. Fibromialgija je zato zapleten polisimptomatski sindrom, katerega ni mogoče določiti samo z eno specializacijo, temveč je potrebna aktivacija številnih – v glavnem algologija, nevrologija, revmatologija, psihiatrija in rehabilitacijska medicina. Zato obstaja vprašanje, kdo naj vodi in spremlja takšne paciente, še posebej zato, ker se tekom bolezni lahko pri različnih pacientih razvijejo različni simptomi, pa tudi zato, ker je fibromialgija lahko zelo izpodbijana. Zato je potreben multidisciplinaren pristop, kjer specializirani in nespecializirani zdravniki strogo sodelujejo z drugimi zdravstvenimi delavci.

Tudi če bi zdravniki že pred desetletji priznavali fibromialgijo kot klinično entiteto, je to zelo kontroverzna bolezen, tudi kar zadeva njeno nesološko klasifikacijo. Zahtevnost diagnostike je toliko večja zaradi zahtevne polisimptomatologije, kar se lahko z razvojem bolezni pri vsakem pacientu še poveča. Zato se diagnostični in klasifikacijski kriteriji nenehno razvijajo. Ameriško revmatološko društvo (ACR) je bilo prvo, ki je v diagnostiko fibromialgije vpeljalo nekaj reda. V 90. letih prejšnjega stoletja je fibromialgija bila uradno priznana kot diskretna klinična entiteta; kriteriji klasifikacije ACR iz leta 1990 so priznavali samo razširjeno bolečino (opredeljeno kot bolečino na levi in desni strani telesa, nad in pod pasom in bolečino v aksialnem skeletu, tj. bolečino v cervikalni ali torakalni hrbtenici, v sprednjem delu prsnega koša ali v spodnjem delu hrbta) in občutljivost (opredeljeno kot bolečino palpacije v ≥11 od 18 točkah) za določitev diagnoze fibromialgije. Po dvajsetih letih je ACR uvedlo kriterije z izčrpnim seznamom simptomov, ki se lahko pojavijo pri pacientih s fibromialgijo (še posebej z lestvico resnosti simptomov). Čeprav so kriteriji celoviti, pa niso zelo uporabni pri vsakodnevni klinični praksi. Poenostavljeni so bili šele leta 2011, ko se je seznam povezanih simptomov skrajšal, po letu 2016 pa je bil poudarjen koncept »generalizirane bolečine«. Namen najnovejših AAPT diagnostičnih kriterijev je ustvariti uporabno orodje za zdravnike pri postavitvi diagnoze fibromialgije. Kriteriji so razdeljeni na različna področja. Področje 1 vključuje osnovne diagnostične kriterije, med katere sodijo tri: (1) bolečina na več mestih, ki je opredeljena kot bolečina na 6 ali več točkah od skupno 9; (2) zmerne do resne težave s spanjem ALI utrujenost; (3) bolečina na več mestih in utrujenost ali težave s spanjem morajo biti prisotni vsaj 3 mesece. Druga področja lahko okrepijo prepričanje v diagnozo: skupne značilnosti, epidemiologija, psihiatrične težave, funkcionalne posledice in dejavnike tveganja, vse to lahko zdravniki upoštevajo, prav tako pa je vse te podatke potrebno temeljito raziskati pri jemanju anamneze.

AAPT kriteriji pa prav tako poudarjajo koncept, da prisotnost drugih težav ne izključuje obstoj fibromialgije kot komorbidnosti. Pravzaprav so številna revmatska obolenja močno razširjena pri pacientih s fibromialgijo, velja pa tudi obratno. Nekateri zdravniki zaradi številnih razlogov neradi postavijo diagnozo fibromialgije: negotovost o obstoju diagnoze, še posebej zaradi pomanjkanja biomarkerjev oz. patognomoničnih znakov, oklevanje pri »označevanju« pacienta s »stigmatiziranim« sindromom itd. V nekaterih primerih pa lahko drugi pogoji posnemajo fibromialgijo, še posebej: nedavni pojav revmatičnih bolezni (revmatična polimialgija, revmatoidni artritis, itd), endokrine bolezni (hipotiroidizem, pomanjkanje vitamina D), gastrointestinalne bolezni (celiakija), nalezljive bolezni (lymska bolezen, hepatitis C), kot tudi zgodnje faze malignosti, kot npr. metastatski rak, levkemija in limfom. Vedno je potrebno opraviti določene laboratorijske preiskave in temeljito povzeti anamnezo.

Patogeneza fibromialgije še ni povsem jasna; predvideva se, da bolečina fibromialgije lahko izvira zaradi kombinacije genetskih predispozicij, stresnih življenjskih dogodkov, perifernih (vnetnih) in centralnih (kognitivnih – emocionalnih) mehanizmov, ki se prepletajo in tako ustvarijo občutek bolečine zaradi nevromorfoloških sprememb. Ta vrsta napačne percepcije se imenuje »nociplastična bolečina«, kar je klinična opredelitev bolečine iz spremenjene nocicepcije, kljub temu, da ni nobenega znaka o poškodbi tkiv, ki bi povzročala aktivacijo nociceptorjev oz. znaka bolezni ali lezij somatosenzornega sistema, ki povzroča bolečino. Jasno je, da je pri obvladovanju fibromialgije potrebno upoštevati tudi te dejavnike, zato mora biti multimodalno in v osnovi temelji na treh stebrih: (1) izobrazba in kondicija pacienta; (2) farmakološka terapija; (3) psihoterapija. Izobrazba pacienta in izvedba strukturiranega načrta vaj sta najpomembnejša stebra zdravljenja fibromialgije, kar lahko vsakemu pacientu zagotovi njegov osebni zdravnik. Na drugi strani pa je lahko specifična farmakološka terapija bolj težavna za neizkušenega zdravnika. Terapijo pri resnejših primerih, kar po ocenah nastopi pri eni tretjini pacientov s fibromialgijo, lahko uvede specialist, ki je običajno revmatolog ali algolog. Spremljanje pacienta se nato lahko izvaja preko integriranega omrežja, ki ne vključuje samo specializirane in nespecializirane zdravnike, temveč tudi druge zdravstvene delavce, kot so npr. terapevti za rehabilitacijo in poklicni terapevti, psihologi in psihoterapevti. Oblikovanje takšne organizirane mreže zdravstvenega osebja, ki vključuje sistemsko in kodificirano diagnostično-terapevtsko zdravljenje, je lahko ključnega pomena pri zagotavljanju ustreznega terapevtskega pristopa po meri pacienta.

Sindrom fibromialgije: etiopatologija, simptomatika in diagnostika

Avtor: Daša Šuput Skvarča, dr. med., Univerzitetni klinični center Ljubljana, Klinični oddelek za revmatologijo, Slovenija

Ključne besede: fibromialgija, razširjena bolečina, etiopatogeneza, diagnoza

Problem: Ali dovolj dobro poznamo sindrom fibromialgije?

Etiopatogeneza: Jasen etiološki dejavnik, ki bi sprožil sindrom fibromialgije ni poznan, poznani pa so dejavniki tveganja, ki povečajo verjetnost za njen razvoj. Med genetske dejavnike sodijo polimorfizmi genov, ki so vpleteni v metabolizem živčnih prenašalcev. Med zunanje dejavnike, ki povečajo možnost za razvoj fibromialgije, uvrščamo določena psihična stanja (somatizacija, psihični stres, generalizirana anksiozna motnja, panična motnja), okužbe, hormonske motnje, prekomeren telesni napor.

V sklopu sindroma fibromialgije ni prisotnega vnetnega dogajanja. Glavni razlog za razvoj bolečinske simptomatike sta hiperalgezija in alodinija, ki najverjetneje nastaneta kot posledica centralne senzitizacije in sledeče neustrezne zaznave bolečinskih in nebolečinskih dražljajev.

Simptomatika: Temeljni simptomi fibromialgije so razširjena bolečina, utrujenost ter motnje spanja, ki trajajo vsaj tri mesece in jih ne moremo razložiti z drugim stanjem, pogosto jih spremljajo kognitivne motnje, depresija, glavobol, parestezije in drugi simptomi.

Diagnostika: Na sindrom fibromialgije pomislimo pri bolnikih, ki že vsaj tri mesece navajajo razširjeno bolečinsko simptomatiko, s kliničnim pregledom in preiskavami pa ne najdemo drugega vzroka, ki bi pojasnil bolnikove težave. Pri postavitvi diagnoze uporabljamo leta 2016 obnovljena diagnostična merila Ameriškega revmatološkega združenja (ACR), s pomočjo katerih opredelimo stopnjo resnosti fibromialgije – FS (Fibromyalgia Severity) scale. Gre za vprašalnik v dveh delih: indeks razširjenosti bolečinske simptomatike – WPI (widespread pain index: 0-19) in lestvico resnosti simptomov – SSS (symptom severity scale: 0-12).

Spoznanja: Uspeh zdravljenja bolnikov s fibromialgijo je v povprečju slab, poleg tega sindrom fibromialgije v družbi še vedno ni vsesplošno sprejet kot omejujoče resnično stanje. Boljši uspeh zdravljenja dosežemo le, če bolnika natančno seznanimo z naravo bolezni, nujno pa mora sprejeti tudi aktivno vlogo v zdravljenju. Zelo pomemben je multidisciplinaren pristop, poleg tega je pomembna ureditev razmer v delovnem okolju.

Diagnostični problemi pri ugotavljanju sindroma fibromialgije

Avtor: Jaka Ostrovršnik, dr. med., Univerzitetni klinični center Ljubljana, Klinični oddelek za revmatologijo, Slovenija

Ključne besede: fibromialgija, diagnoza, zdravljenje

Povzetek: Fibromialgija je kronična, jasno opredeljena in resnična bolezen. Nove diagnostične in terapevtske smernice so ves čas v razvoju. Pravilna postavitev diagnoze je zelo težavna, saj ne poznamo specifičnih kliničnih ali laboratorijskih kazalcev. Fibromialgijo smatramo kot diagnozo izključitve in je pravilna postavitev diagnoze pogosto odvisna od izkušenj lečečega zdravnika. Posledično je diagnoza lahko postavljena prepogosto, preredko ali pa neustrezno. Natančna anamneza in klinični pregled je nujen, da lahko izključimo druga kronična stanja z razširjeno bolečinsko simptomatiko. Le tako lahko prizadetega bolnika ustrezno zdravimo.

Stopenjski pristop k zdravljenju bolnikov s fibromialgijo

Avtor: prim. **Mojca Kos Golja,** dr. med., spec. int. med. in revmatologije, predsednica Strokovnega sveta Društva za fibromialgijo, Slovenija

Ključne besede: sindrom fibromialgije, stopenjsko zdravljenje, nefarmakološko zdravljenje, farmakološko zdravljenje

Zdravljenje fibromialgije predstavlja velik izziv za družinskega zdravnika in bolnika. Učinkovitost zdravljenja zelo zavisi od zgodnje diagnoze, terapevtske odločitve se sprejemajo v soglasju z bolnikom. Evropska liga za borbo proti revmatizmu je leta 2017 ugotavljala, da terapevtske smernice niso več ustrezne. Zato je izdelala nove, ki veljajo še danes. V ta namen je bila ustanovljena multidisciplinarna skupina iz dvanajstih evropskih držav, ki jo je sestavljalo osemnajst strokovnjakov različnih kliničnih specialnosti, medicine dela, epidemiologije, zdravstvene nege in bolniki. Proučili in razporedili so skoraj tri tisoč strokovnih člankov in meta-analiz, ki so jim služili za pripravo na dokazih temelječih terapevtskih smernic. Za ključne izide zdravljenja so izbrali lajšanje bolečin, zmanjšanje utrujenosti, izboljšanje spanja in bolnikove funkcionalnosti. Ocenjevali so nefarmakološke ukrepe in farmakološko zdravljenje. Nekateri izsledki so kazali, da je lahko učinkovito zdravljenje brez zdravil, pogosteje pa se obe obliki prepletata in kombinirata. Nefarmakološke oblike zdravljenja so prva stopnja. Najprej je potrebno seznanjanje bolnika z naravo bolezni in motiviranje za aktivno sodelovanje. Proučevana literatura je pokazala, da je najbolj učinkovita redna, postopno stopnjevana telesna vadba, ki zmanjša bolečine in izboljša bolnikovo funkcionalnost (aerobne aktivnosti, vaje za krepitev moči, raztezne vaje). Sprostilne tehnike (joga, pilates, tai chi, qi gong), ki zmanjšajo utrujenost, izboljšajo spanje, so v raziskavi ocenjene kot zmerno učinkovite. Podobno velja za akupunkturo, kognitivno-vedenjsko terapijo, hidroterapijo. Proučili so tudi farmakološko zdravljenje, ki je simptomatsko, ni specifično, ni učinkovito pri vseh bolnikih, pogosti so neželeni učinki. Pri depresiji, anksioznosti, katastrofičnosti je potrebna psihiatrična obravnava in psihofarmaki. Od analgetikov je uporaben tramadol, antirevmatiki niso učinkoviti. Kot sprejemljivi, zmerno učinkoviti pri bolečinah in motnjah spanja, so se izkazali triciklični antidepresivi, SSRI, SNRI, antikonvulzivi, dopaminski agonisti, mišični relaksansi. Pri hudi nezmožnosti, daljši bolniški odsotnosti, so navedeni multimodalni rehabilitacijski programi - pri nas jih izvaja Univerzitetni rehabilitacijski inštitut RS-Soča. Zaključki strokovne skupine so, da so potrebne nadaljnje raziskave, še bolj individualizirani pristopi in specifične oblike zdravljenja.

Fibromialgija – primer iz prakse

Avtorici: mag. **Olivera Masten Cuznar,** dr. med., spec. spl. med., Zavod za zdravstveno zavarovanje Slovenije, Slovenija
Tatjana Zavodnik Krupenko, dr. med., spec. spl. med., Zasebna splošna ordinacija, Slovenija

Ključne besede: fibromialgija, začasna nezmožnost za delo, delovno mesto, vračanje na delo

Sprožilci simptomov fibromialgije so lahko različni fizični in psihični stresorji. Po podatkih iz literature lahko zboli kdorkoli, pogosteje ženske kot moški, bolezen prizadene delovno aktivno populacijo. Rizični dejavniki za razvoj bolezni in za dolgotrajno ter pogosto nezmožnost za delo, so bolj na strani delovnega mesta in pogojev dela kot na strani simptomov bolezni in osebnostnih lastnosti bolnika. Simptomi fibromialgije so lahko spremljevalci in znanilci drugih bolezenskih stanj. Ni specifičnega testa za odkrivanje bolezni niti specifičnega zdravljenja. Zdravljenje simptomov je farmakološko in nefarmakološko: antidepresivi in protibolečinska zdravila, psihoterapija in sprememba življenjskega sloga (redna telesna vadba - hoja, kolesarjenje, plavanje in metode sproščanja). Bolniki s fibromialgijo so pogosti obiskovalci osebnega zdravnika, pogosto so napoteni na diagnostiko in k različnim specialistom na sekundarni nivo, zato je nujen zgoden, individualen in multidisciplinaren pristop, ob obveznem sodelovanju bolnika.

V. M., 54-letna socialna oskrbovalka, z zgodovino kratkotrajnih zaposlitev, menjavanja delodajalcev, že četrto leto nezmožna za delo. J. V., 57-letna delavka za preprosta dela v proizvodnji, ki se je po multidisciplinarni obravnavi in ob pomoči sodelavcev uspela naučiti, kako dolgoročno obvladovati bolečine in ostati na delovnem mestu.

Ponavljajoča in dolgotrajna nezmožnost za delo prizadene bolnika, delodajalca, obremenjuje zdravstveni sistem in povzroča veliko finančno breme. Bolniki morajo imeti možnost pravočasne in ustrezne obravnave že na primarnem nivoju, da ostane prostor in čas za najtrdovratnejše primere na sekundarnem in terciarnem nivoju. Cilj obravnave je, da se bolniki naučijo živeti s simptomi, jih obvladovati in se vrnejo v delovno okolje vsaj za skrajšani delovni čas. Za uspešno zdravljenje bolezni in vračanje na delo je ključno razumevajoče delovno okolje in vzdrževanje stikov med delodajalcem, zaposlenim in njegovimi sodelavci že v času začasne nezmožnosti za delo, pred nastopom dela kot tudi po nastopu dela. V pogovorih je smiselno načrtovati podrobnosti vračanja na delo kot tudi možne prilagoditve delovnih obremenitev in delovnega mesta.

Umetna inteligenca v zdravstvu

Avtor: prof. dr. **Igor Kononenko,** dipl. inž. rač. in inf., Univerza v Ljubljani, Fakulteta za računalništvo in informatiko, Slovenija

Ključne besede: umetna inteligenca, strojno učenje, podatkovno rudarjenje, računalniško podprto diagnosticiranje

Inteligenca je sposobnost prilagajanja okolju in reševanja (težkih) problemov. Umetna inteligenca razvija algoritme strojnega učenja za reševanje težkih problemov, ki iz podatkov zgradijo model in ga uporabljajo za reševanje novih problemov. Na primer, iz podatkov o diagnozah pacientov lahko naučeni model uporabimo za diagnosticiranje novih pacientov. Modeli strojnega učenja so lahko odločitvena drevesa in pravila, verjetnostni modeli, modeli, ki temeljijo na podobnosti in v novejšem času vse bolj popularne umetne (globoke) nevronske mreže, ki dosegajo vrhunske rezultate. Strojno učenje se lahko uporabi povsod, kjer so na voljo podatki. Z naučenimi modeli rešujemo težke probleme, kot so napovedovanje verjetnosti (ne)vračila kredita, detekcija pokvarjenih izdelkov na tekočem traku, prepoznavanje človeškega govora, prepoznavanje obraza in tudi čustvenega stanja, igranje šaha in drugih iger, povzemanje besedil, postavljanje vejic v besedilu, ugotavljanje bančnih goljufij, ugotavljanje, kateri izdelek/film/knjiga je zanimiv za dano stranko, reševanje pravnih sporov, upravljanje samovozečega avtomobila...

Uporaba v zdravstvu obsega mnoga področja, kot so diagnosticiranje in prognosticiranje poteka bolezni, analiza medicinskih slik, detekcija zgodnjih znakov bolezni, izbira čimbolj ustreznega zdravljenja, iskanje najhitrejše poti za vozila prve pomoči, razporejanje pacienta z danimi simptomi ustreznemu specialistu, pomoč pri operacijah z inteligentnimi roboti, kot tudi pomoč pri razvoju novih zdravil z ugotavljanjem funkcij genov, iskanjem novih biokemičnih povezav v človeškem telesu, ugotavljanje biokemičnih lastnosti kompleksnih molekul, ugotavljanje lastnosti pacientov za klinične poskuse. Poleg reševanja zdravstvenih in kliničnih problemov, se umetna inteligenca uporablja tudi za ostala opravila v zdravstvu, kot so načrtovanje in optimizacija urnikov, finančnih in zavarovalniških protokolov, iskanje podatkov in urejanje medicinskih podatkovnih baz...

Treba se zavedati omejitev, da gre kljub vsemu za nezaveden stroj, ki lahko sicer izkazuje zelo inteligentno in kvalitetno reševanje problemov, pa vendar gre za omejen (neživljenjski) pogled na svet. Življenje je nepredvidljivo in prekompleksno, da bi se ga dalo popolnoma opisati z algoritmi, zato je človek še vedno nepogrešljiv pri odločanju.

Obravnava oseb s fibromialgijo pri zdravniku družinske medicine

Avtor: izr. prof. prim. **Danica Rotar Pavlič,** dr. med., spec. druž. med., Katedra za družinsko medicino, Ljubljana, Galenia, d. o. o., ambulanta družinske medicine, Slovenija

Ključne besede: fibromialgija, družinska medicina, pojavnost, obravnava, bolniški stalež

Ozadje: Specialist družinske medicine se neredko sreča s primeri fibromialgije, saj je njena ocenjena razširjenostjo med splošno populacijo od 1,1 do 6,4 %. Prednjačijo bolnice. Največkrat se pritožujejo nad jutranjo okorelostjo, utrujenostjo in nespečnostjo, kar vse bistveno vpliva na kakovost življenja in delovno sposobnost. Osrednji simptomi, ki trajajo vsaj tri mesece in vključujejo razširjeno bolečino (desna in leva stran telesa, območje nad pasom ter pod njim ter v aksialnem okostju), pa tudi utrujenost, motnje spanja, mialgijo, otrdelost sklepov, razpoloženjske motnje in kognitivne simptome (npr. pozabljivost, težave s koncentracijo) vodijo v dolgotrajno odsotnost z dela. Ta se večinoma zaključi z oceno invalidnosti.

Metode: Pregled diagnoz M79.70 – M79.79, R51.1 – R52.9 (kronična neznosna bolečina) v obdobju od leta 2015 do 2020 v ambulanti družinske medicine.

Rezultati: V ambulanti družinske medicine, ki ima registriranih 2300 odraslih bolnikov, smo v petletnem obdobju zabeležili 14 oseb s sumom na fibromialgijo in jih napotili na fiziatrično obravnavo v URI Soča. Bolezen je bila potrjena v devetih primerih. V istem obdobju je bilo v ambulanti vodenih 32 bolnikov s kronično neznosno bolečino, ki niso zadostili kriterijem fibromialgije in je diagnostika pri njih večinoma razkrila, da gre za bolečino z opredeljivim somatskim vzrokom. V naši raziskavi se noben izmed bolnikov s fibromialgijo na podlagi »dr. Googla« ni opredelil za to diagnozo, temveč so ambulanto obiskovali zaradi bolečine, psiholoških težav, bolniškega staleža in želje po upokojitvi.

Zaključki: Menim, da je treba dosledno uporabljati potrjena diagnostična merila za postavitev diagnoze fibromialgija. Nujno je interdisciplinarno sodelovanje specialistov družinske medicine, fizikalne medicine in rehabilitacije, MDPŠ, imenovanih zdravnikov in zdravnikov, delujočih v okviru ZPIZ.

Psihološki vidiki kronične nerakave bolečine

Avtor: dr. **Barbara Horvat Rauter,** univ. dipl. psih., specializantka klin. psih., Univerzitetni rehabilitacijski inštitut Republike Slovenije - Soča, Ljubljana, Slovenija

Ključne besede: kronična nerakava bolečina, dejavniki tveganja, psihološke posledice, oblike pomoči

Povzetek: Kronična nerakava bolečina je multidimenzionalna izkušnja, saj vključuje tako neprijetno senzorno kot tudi čustveno izkušnjo, ki je povezana z dejansko ali možno poškodbo/okvaro tkiva. S kronično bolečino se tekom življenja po nekaterih ocenah spoprijema do 20 % posameznikov, zaradi česar je ukvarjanje s kronično bolečino izrednega pomena. Ker je izkušnja bolečine rezultat vpliva tako bioloških dejavnikov, kot tudi bolnikovih osebnostnih dejavnikov ter kulturnega in socialnega okolja, je potrebna bio-psiho-socialna obravnava.

V prispevku želimo predstaviti kronično bolečino z vidika psihologa. Na kratko bomo spregovorili o različnih psiholoških teorijah kronične bolečine, dejavnikih tveganja (individualne in medosebne) in vzdrževalnih dejavnikih bolečinske simptomatike. Osrednji prostor pa bomo namenili posledicam kronične bolečine.

Ob daljšem rednem vztrajanju bolečinske simptomatike postane spoprijemanje z njo vse bolj stresno in se odraža na posameznikovem celostnem delovanju - na kognitivni (miselni), čustveni in vedenjski ravni. Spremembe mišljenja in kognitivnih sposobnosti so opazne tako na vsebinskem kot formalnem področju. Vsebina je pogosto usmerjena na problemske situacije ter na bolečino samo. Pojavlja se katastrofično doživljanje v obliki ruminacij in magnifikacij. V formalnem smislu lahko pride zaradi stresnega delovanja bolečine do izčrpavanja, ki vodi v oškodovane kapacitete pozornosti, slabše pomnjenje in počasnejše obdelovanje informacij. Pri bolnikih s kronično bolečino, je zaradi dolgotrajne razbolelosti praviloma prisotno neprijetno čustvovanje, najpogosteje v doživljanju anksioznosti, žalosti, jezljivosti, v občutkih nemoči in negotovosti z mislijo, ali bo sploh še kdaj dobro. Sorazmerno pogoste so težje psihiatrične motnje iz kroga depresije in anksioznosti, zloraba snovi in zasvojenost, motnje s telesnimi simptomi. V splošnem spoprijemanje z bolečino osiromaši kakovost življenja. Bolniki so zaradi doživljanja bolečine bolj pasivni, mnogi poročajo o osiromašenem družabnem življenju ter težavah na delovnem mestu, saj ne zmorejo kakovostne in učinkovite vpetosti v zahteve ter dolžnosti, ki jim jih nalaga polni delovni čas.
Nasploh kronična bolečina spreminja in omejuje bolnikove vsakdanje življenjske aktivnosti, in postopno njegovo osebnost. V zaključnem delu prispevka bomo predstavili najbolj uveljavljene oblike psihološke pomoči in podpore.

Fibromialgija v luči nevrologa

Avtor: prof. dr. **Marjan Zaletel,** dr. med., spec. nevrologije, višji svetnik, Univerzitetni klinični center Ljubljana, Bolnica Petra Držaja, Slovenija

Ključne besede: fibromialgija, klinična slika, patofiziologija, zdravljenje

Izvleček: Fibromialgija (FM) je medicinsko stanje z razširjeno telesno bolečino brez okvare tkiva, ki ga bolnik ne simulira. FM je bolezen, ki je opredeljena z vsemi njenimi dimenzijami. Nevrološko, FM razumemo kot primarno nevrokognitivno okvaro. Je posledica delovanja genetskih in okolnih dejavnikov. Temelj razumevanja FM predstavlja interoceptivni bolečinski model. Značilnost FM je povečana občutljivost na mehanski lokalni pritisk, kar je dokaz motene integracije senzoričnih signalov v reprezentativno shemo telesa. Proces integracije je povezan s predvidevanji, ki so posledica preteklih izkušenj posameznika. Torej obdelava senzoričnih signalov, kot je nocicepcija, ni enostavno posledica prenosa senzoričnih informacij od periferije telesa v možgane, ampak tudi obratno. Torej obstoječe mentalne reprezentacije o telesu pomembno vplivajo na percepcijo bolečine. Nekatere dele razširjene bolečine lahko pojasnimo z nevrološko okvaro, ki je naključno ugotovljena. Informacijski proces, predvideno kodiranje, razloži zakaj negotovost predvidevanja porodi tudi pridružene motnje razpoloženja značilne za FM.

V nevrološki anamnezi bolnika s FM lahko ugotovimo razširjeno bolečino, motnje spanja, čustvovanja in utrudljivost, ki predstavljajo klinični korelat centralne senzitizacije. Pri nevrološkem pregledu lahko ugotovimo motnje s področja motorične, senzorične dejavnosti, motnje ravnotežja in delovanja možganskih živcev. Pri pregledu kognitivnih dejavnosti lahko ugotovimo motnje pomnjenja, odkrenljivost, neorganizirano mišljenje. Slednje so povezane z intenziteto bolečine in motnjami razpoloženja. Značilno za nevrološke in kognitivne dejavnosti je, da so samo-ocenjene težave hujše od objektivno ugotovljenih. Dokončne okvare centralnega in perifernega živčevja praviloma ne ugotovimo niti z nevrološkim pregledom niti z dodatnimi preiskavami. FM je bolezen, ki bolnike ovira, jih onesposablja za delo, družbeno življenje in jim onemogoča opravljanje družbenih vlog. Vrednostni sistem pri FM je zelo moten, kar odpira vprašanje širšega smisla. Zato FM obravnavamo v nevrološkem biopsihosocialnem modelu.

Zdravljenje centralne senzitizacije je lahko učinkovito z zdravili iz skupine antiepileptikov in antidepresivov. Spreminjanje mentalne reprezentacije je pomemben del zdravljenja. Cilj zdravljenja je izboljšati bolnikovo funkcijsko stanje.

Fibromialgija v luči psihiatrije

Avtor: izr. prof. **Maja Rus Makovec,** dr. med., spec. psih., Univerzitetna psihiatrična klinika Ljubljana, Slovenija

Ključne besede: fibromialgija, stres, funkcionalnost, prepričanja psihiatrov

Ozadje: V psihosomatiki je posebej izražena potreba po toleriranju visoke stopnje etiološke dvoumnosti, kar potrebuje specifičen trening oz. profesionalno samorefleksijo. Sicer se razvijajo pretirano polarizirana prepričanja psihiatrov, podprta tudi s pomanjkljivo razdelanimi in podeljenimi koncepti glede narave fibromialgije. Tipična psihiatrična perspektiva ima nalogo identifikacije komorbidnih stanj z visoko prevalenco s fibromialgijo, manj gotovosti pa je glede vloge pri zdravljenju in oceni delovne funkcionalnosti teh pacientov, posebej, če v simptomatiki prevladuje predvsem fenomen somatizacije. Fibromialgija potrebuje zelo izrazito empatičnost (ki ne pomeni pristajanja na vsa pričakovanja bolnikov) do subjektivitete bolnikov, ki poročajo o svojih simptomih utrudljivosti, motnjah kognicije in spanja, difuzni bolečini, doživljajo aktivacijo kot škodljivo, pri izražanju nemoči pa lahko neredko delujejo nesorazmerno vztrajno. Vlogo »težkega pacienta« lahko so-kreira doživljanje nerazumevanja v medicinskem kontekstu.

Metode: Prepričljivi nevroznanstveni razlagalni argumenti ugotavljajo spremenjeno centralno procesiranje senzoričnega vnosa v smislu centralne senzitizacije; motena je funkcija eferentnih centralnih poti oziroma gre za disfunkcionalno procesiranja stresa, s slabšo zmožnostjo za samopomirjanje na vegetativni ravni; vpleteni so tudi drugi procesi na ravni socialnih možganov in imunosti.

Rezultati: Iz pregleda razlagalnih konceptov fibromialgije, je s psihiatrične plati potrebno oceniti izraženost morebitne sočasne motnje razpoloženja, anksioznosti in s stresom povezane motnje, kognitivne funkcije, škodljivo rabo benzodiazepinov oz. psihotropnih analgetikov in morebitne klinično pomembne osebnostne lastnosti, vedenjske strategije spoprijemanja, kontekstualno pa norme in vrednote glede dela.

Zaključki: Osnova psihiatričnega koncepta o duševnem zdravju sta zmožnosti za navezovanje odnosov in delovno aktivnost. S perspektive centralnega procesiranja bolečine ter motenj v uravnavanju stresa, je tudi brez druge psihiatrične komorbidnosti potrebno zmanjšati zunanje vire napetosti: ne delati na normo, ne z vsiljenim ritmom dela, ne ponoči. Personalizirati pa je potrebno oceno skrajšave delovnega časa in druge olajšave. Poudarjena je do doživljanja bolnikov empatična profesionalna drža, ki delno aktivacijo vidi kot ohranjanje zdravih potencialov bolnika s fibromialgijo.

Timski pregled v subspecialistični ambulanti za rehabilitacijo oseb s sindromom fibromialgije in z drugimi oblikami kronične bolečine: odločanje o napotitvi na invalidsko komisijo

Avtor: Helena Jamnik, dr. med., spec. fiz. in rehab. med., Univerzitetni rehabilitacijski inštitut Republike Slovenije - Soča, Ljubljana, Slovenija

Ključne besede: kronična bolečina, zmožnost za delo, rehabilitacija

Uvod: V prispevku je predstavljena analiza timskega presojanja o preostali delazmožnosti v sklopu ocenjevalno triažnega postopka (OTP), ki je namenjen predvsem ugotavljanju zmožnosti za vključevanje v interdisciplinarni rehabilitacijski program za osebe s kronično bolečino.

Metode: Vključeni so bili vsi, ki so od februarja do novembra 2019 opravili OTP, razdeljeni v skupine glede na končne timske odločitve. Predstavitev pred invalidsko komisijo 1. skupina: ni predlagana; 2. skupina: je predlagana, razbremenitve niso opredeljene; 3. skupina: predlagana časovna delovna razbremenitev; 4. skupina: polna upokojitev; 5. skupina: vsebinske razbremenitve ali prekvalifikacija. Predstavljene so razlike glede na jakost in razširjenost bolečine, izpolnjenost meril za sindrom fibromialgije (SF), obstoj sočasnih obolenj, zaposlitveni status, bolniške odsotnosti ter izobrazbo.

Rezultati: Vključenih je bilo 471 oseb, 15 % moških (povprečna starost 48,4 let), 85 % žensk (povprečna starost 50,6 let). V prvo skupino umeščenih 58 % (60 % izpolnjevalo merila za SF), v drugo 10 % (86 % izpolnjevalo merila za SF), v tretjo 8 % (92 % izpolnjevalo merila za SF), v četrto in peto po 1 %. Preostali so bili dijaki, študentje in upokojenci. V prvo skupino uvrščenih več oseb z manj varnimi oblikami zaposlitve (samozaposleni, določen čas - 14-16 %, v ostalih jih ni bilo); v drugo več nezaposlenih --- 40 % (v ostalih, razen četrte, 16 -23 %), več s sočasnimi obolenji --- 83 % (v ostalih, razen četrte, 63-73 %) ter več --- 50 % s končano osnovnošolsko izobrazbo (v ostalih 7-21 %); v četrti skupini ugotovljena pri vseh sočasna psihiatrična obolenja in dolgotrajna poklicna neaktivnost. V jakosti bolečin ni bilo bistvenih razlik (ŠAL 6,6; SD 1,84), pri večini je šlo za razširjene oblike bolečine, ne glede na izpolnjenost meril za SF.

Razprava in zaključek: Pri skoraj 20 % napotenih smo presojali glede preostale delazmožnosti, rehabilitacijski ukrepi pri teh ne bi več vplivali na delazmožnost. V prispevku bodo na podlagi vseh podatkov, pridobljenih v raziskavi, širše prestavljene dileme povezane s presojanjem.

Zgodnje vračanje oseb s fibromialgijo na delovno mesto

Avtor: prim. **Bojan Pelhan,** dr. med., spec. med. dela, prometa in športa, Univerzitetni rehabilitacijski inštitut Republike Slovenije – Soča, Center za poklicno rehabilitacijo Ljubljana, Slovenija

Soavtorji: Metka Teržan, dr. med., spec. med. dela, prometa in športa, Univerzitetni rehabilitacijski inštitut Republike Slovenije – Soča, Center za poklicno rehabilitacijo Ljubljana, Slovenija
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Ključne besede: fibromialgija, delovna zmožnost, zgodnja poklicna rehabilitacija, kakovost življenja

Ozadje/vprašanje/problem: Dolgotrajne, kronične mišično skeletne bolečine močno vplivajo na kakovost življenja in tudi na zmožnost za delo. Delazmožnost večine oseb s fibromialgijo je zmanjšana, vendar jih 34 do 77 % še naprej dela. Bolezni, ki povzročajo kronične bolečine v mišicah in sklepih, so globalno najpogostejši vzrok invalidske upokojitve.
Večina oseb s fibromialgijo je žensk, študije poročajo o 10 – 15 % moških v populaciji oseb s fibromialgijo. Prevalenca žensk s fibromialgijo v populaciji je med 0,75 % in 4,9 %.

Osebe s fibromialgijo poročajo, da so simptomi, ki najbolj vplivajo na delovno zmožnost: bolečine, utrujenost, zmanjšana mišična moč ter težave s spominom in koncentracijo.

Metode: Proučili smo razpoložljivo literaturo in upoštevali izkušnje iz obravnav oseb s fibromialgijo v Centru za poklicno rehabilitacijo, URI Soča. Za oceno delovne zmožnosti osebe s fibromialgijo uporabljamo biopsihosocialni model: ocena sposobnosti, delovne uspešnosti in položaja na trgu dela, upoštevaje tudi dodatne dejavnike: vožnja na/z dela, možnost zaposlitve v lokalnem okolju, konkretna življenjska situacija osebe.

Rezultati: Dejavniki, ki nakazujejo verjetnost bolniške odsotnosti že prvo leto po diagnosticiranju fibromialgije žensk so: mladost, manjša fizična aktivnost, močnejše bolečine, slabše obvladovanje bolečine ter nizka izobrazba.
Zgodnjega vračanje na delo je potrebno pričeti čimprej, preventivni ukrepi lahko preprečijo napredovanje bolezni.

Škodljive delovne obremenitve za osebe s fibromialgijo so: težka fizična dela, delo nad nivojem ramen, močni stiski, pogosto prenašanje in dviganje, statične obremenitve, vsiljen ritem in hiter tempo dela, enostransko mišično, monotono delo, nadurno, izmensko in nočno delo ter delo v hladnem okolju in na prepihu.
Individualno načrtovane prilagoditve dela in delovnega mesta morajo ustrezati dejanskim zmožnostim osebe s fibromialgijo, dogovorjene morajo biti z delodajalcem in osebo s fibromialgijo. Pomembno je natančno poznavanje delovnih zahtev, obremenitev in škodljivosti na delovnem mestu. Poslužujemo se dolgotrajnega testiranja oseb s fibromialgijo na prilagojenem delovnem mestu, s poskusom postopnega podaljševanja delovnega časa. Prilagojen življenjski slog osebe s fibromialgijo in celovito psihosocialno delovno okolje so pomemben dejavnik uspešnosti zgodnjega vračanja na delo.

Zaključki/spoznanja: Ukrepi za preprečevanje razvoja in nastanka kronične bolečine, zgodnja diagnostika in sodobno zdravljenje ter celostna rehabilitacija z zgodnjo poklicno rehabilitacijo, lahko vplivajo na ohranjanje zaposlitve in večje kakovosti življenja oseb s fibromialgijo.

Izkušnje sodnega izvedenca s fibromialgijo

Avtor: izr. prof. dr. **Metoda Dodič Fikfak,** dr. med., spec. med. dela, prometa in športa, Univerzitetni klinični center Ljubljana, Klinični inštitut za medicino dela, prometa in športa, Slovenija

Ključne besede: fibromialgija, invalidska komisija, bolniški stalež, hitro vračanje v delovni proces

Pacienti s kronično razširjeno bolečino nosijo veliko breme simptomov, ki jim povzročajo padec kvalitete življenja, splošnih življenjskih funkcij in sposobnosti za delo. Posledično velikokrat obiskujejo osebnega zdravnika, imajo številne zdravstvene preglede v eni ali različnih bolnišnicah pri različnih specialistih, ki pogosto med seboj niso usklajeni ne v načinu dela, ne v diagnostičnem postopku kot tudi ne v terapevtskem postopku. Bolečina jih potisne v dolgotrajni bolniški stalež, ki jih postopoma privede do invalidskega postopka, ki pa se skoraj nikoli ne konča z invalidsko upokojitvijo. Prepogosto večletno čakanje takih pacientov na obravnavo brez ustrezne terapije privede do začaranega kroga, ki prizadeva tako pacienta samega kot tudi njegovo okolico.

Moje dosedanje izkušnje sodnega izvedenca v primeru tožb tožnikov s fibromialgijo so vezane predvsem na tožbe zoper mnenje ZPIZ-ovih invalidskih komisij. V vseh primerih je šlo za delavce s III. kategorijo invalidnosti, ki je bila potrjena na drugi stopnji. Osnova za odločanje o invalidnosti so bile kostnomišične bolezni, najpogosteje bolečina v križu, pozneje pa je bila tem priključena še psihiatrična diagnoza, to je depresija. V nobenem od obravnavanih primerov ni invalidska komisija postavila fibromialgije kot prve diagnoze. Odločitev invalidskih komisij je vselej sprožila hujšo depresivno epizodo, ki je pacienta pripeljala do še hujših bolečin in večje osamitve. Kot invalid III. ktg je delavec postal nezaposljiv, izoliran, po obravnavi na IK pa odpuščen, ker zanj ni bilo ustreznega dela, potisnjen na socialni rob v napoto tako sebi kot svojcem.

Tožniki in pacienti se v procesu diagnostike in poskusov zdravljenja srečujejo z različnim odnosom tistih, ki jih obravnavajo, s fragmentacijo zdravljenja, pomanjkanjem časa za obravnavo in predvsem občutkom ujetosti. Ko se ne počutijo razumljeni s strani strokovnjakov, se nagibajo k prekinitvi zdravljenja. Delavci s fibromialgijo bi potrebovali dovolj časa za preglede in obravnavo, boljšo koordinacijo aktivnosti znotraj in med zdravstvenim in socialnim sektorjem in takojšnjo koordinirano kompleksno terapijo, ki bi vključevala tudi vračanje v delovni proces.

Širjenje dobrih praks za obvladovanje absentizma med delodajalci na območni ravni

Avtor: mag. **Evgen Janet,** dr. med., spec. epidemiolog, Zavod za zdravstveno zavarovanje Slovenije, Slovenija

Ključne besede: bolniški dopust, vračanje na delo, sodelovanje delodajalcev

Ozadje: Bolniški dopust (stalež) je negativni kazalnik zdravja aktivne (delovne) populacije. V zadnjih letih na ZZZS opažamo konstantno rast tega kazalnika, skladno s tem naraščajo tudi izdatki za nadomestila. Pri rednem delu imenovani zdravnik na Območni enoti ZZZS redno sodeluje z izbranim osebnim zdravnikom, redkeje se srečuje z ZPIZ-om, po potrebi tudi z zavarovancem, z delodajalci pa tega stika skorajda ni. Ocenjujemo, da je brez tega stika oz. sodelovanja z delodajalci proces vračanja na delo pri relativni delazmožnosti zavarovanca, oviran.

Metode: Na Oddelku za imenovane zdravnike na Območni enoti ZZZS Ravne na Koroškem, smo oblikovali usmeritve za svoje delo v prihodnje z namenom uvajanja hitrejše aktivacije zavarovancev, da se ne zamudi okno priložnosti (3 - 6 mes. BS) pri pogostih zdravstvenih problemih (MKB skupine M, F, I, J). Zato smo poskusili z uvajanjem lažjega dela v sodelovanju z nekaterimi delodajalci in medicino dela, v primeru relativne delazmožnosti zavarovanca. Verjamemo, da čimprejšnja (in stabilna) vrnitev zavarovanca na delovno mesto omogoča boljšo socialno vključenost in socialno varnost.

Rezultati: Izkušnje stika s 3 delodajalci so pokazale, da:

- si želijo, da bi bil delodajalec stranka v postopku odločanja o pravici do BS,
- želijo posredovati informacije o njihovih delovnih mestih,
- bi radi vedeli, kdaj se bo zaposleni vrnil na delovno mesto, potrebujejo več informacij,
- lahko tudi plačajo specialista, kadar je problem predolgo čakanje,
- se oblikuje individualni načrt ukrepanja za čas trajanja BS,
- bi se na ZZZS več ukvarjali z osebnimi zdravniki; škoda se jim zdi, da ni več obratnih ambulant,
- je slaba komunikacija znotraj stroke,
- je bolniški dopust previsok,
- se mnenja medicine dela uporabljajo kot ekspertna mnenja pri odločitvah imenovanih zdravnikov.

Zaključek: Z namenom še boljšega razumevanja delodajalcev smo si omislili anketo med delodajalci Koroške, da bi ugotovili nekatera njihova stališča v zvezi z zdravjem in vračanjem na delo.

Finančno medicinski nadzor na področju ortopedije in rehabilitacije

Avtorji: Marjana Gaber, dr. med., spec. anest. in reanim., Zavod za zdravstveno zavarovanje Slovenije, Slovenija,
mag. **Aleksandra Bola Natek,** dr. med., spec. gin. in por., Zavod za zdravstveno zavarovanje Slovenije, Slovenija,
Milan Rajtmajer, dr. med., spec. spl. med., Zdravstveni dom Celje, Slovenija

Ključne besede: finančno medicinski nadzor, ortopedija, rehabilitacija

Povzetek: Zavarovana oseba, pri kateri se pojavijo težave z lokomotornim sistemom, praviloma najprej obišče izbranega osebnega zdravnika. Kadar njegova obravnava ne zadošča, se diagnostika in zdravljenje nadaljujeta pri specialistih drugih strok in fizioterapevtih. Del oseb potrebuje operativno zdravljenje in pooperativno rehabilitacijo, nekateri tudi zdraviliško zdravljenje. Opravljene zdravstvene storitve se beležijo in obračunavajo po obračunskih modelih, specifičnih za posamezno področje. Podatki o obračunanih storitvah so podlaga tudi za Finančno medicinske nadzore. Pravilnost obračunanih storitev je možno preveriti za vsako področje, kjer je zavarovana oseba obravnavana. V tem prispevku bo podrobneje predstavljen finančno medicinski nadzor v specialistični ortopedski in fiziatrični ambulanti, obračun akutne bolnišnične obravnave, obračun fizioterapevtskih storitev na primarni ravni in pooperativna rehabilitacija.

Finančno medicinski nadzornik mora za korektno opravljen nadzor poznati številna področja, kot na primer, obračunski model nadzorovanega področja in zakonodajo, ki pokriva področje nadzorne dejavnosti: Zakon o zdravstvenem varstvu in zdravstvenem zavarovanju (ZZVZZ), Pravila obveznega zdravstvenega zavarovanja (Pravila OZZ), Splošni dogovor (SD). Za vzdrževanje potrebnega obsega znanja se nadzorniki stalno izobražujemo. Aktivno in kot slušatelji sodelujemo na strokovnih srečanjih različnih področij. V letu 2020 smo, med ostalim, uspešno zaključili prvo izobraževanje Osnove medicinskega izvedenstva in zavarovalniške medicine.

Prvi diplomanti medicinskega izvedenstva in zavarovalniške medicine v Sloveniji

Avtor: mag. **Jana Mrak,** dr. med., Zavod za zdravstveno zavarovanje Slovenije, Slovenija

Ključne besede: zavarovalniška medicina, medicinsko izvedenstvo, izobraževanje

Problematika: Potrebe družbe od osamosvojitve Slovenije leta 1991 dalje so vodile do nastanka nove medicinske stroke, ki se je oblikovala na delovnih mestih zdravnikov v dveh javnih zavodih: Zavodu za zdravstveno zavarovanje Slovenije (Zavod) in Zavodu za pokojninsko in invalidsko zavarovanje. Sekcija za medicinsko izvedenstvo in zavarovalniško medicino (Sekcija) pri Slovenskem zdravniškem društvu (SZD) je vsebinsko zasnovala in po potrditvi tudi izvedla prvo sistematično izobraževanje s tega področja v Sloveniji s podporo Zavoda.

Opis: Program posebnih znanj medicinskega izvedenstva in zavarovalniške medicine, kot ga je pripravila Sekcija, je potrdil Generalni strokovni svet (GSS) SZD. Vključeval je predavanja o sistemih zdravstvenega zavarovanja, pravnih aktih s tega področja v Sloveniji, modelih obračuna zdravstvenih storitev, finančno medicinskem nadzoru, ocenjevanju delazmožnosti in odločanju o pravicah iz obveznega zdravstvenega zavarovanja.

Rezultati: Tudi Zdravniška zbornica Slovenije je program izobraževanja potrdila in mu dodelila 50 kreditnih točk. V skladu s programom je bilo 50 od skupno 400 ur izobraževanja organizirano v obliki predavanj in seminarjev, kar je potekalo od septembra 2018 do septembra 2019. Ostalo, to je praktični del izobraževanja (finančno medicinski nadzori, izdajanje izvedenskih mnenj, odločanje o pravicah iz obveznega zdravstvenega zavarovanja), je potekalo vzporedno vse leto 2019. Vsi udeleženci izobraževanja so izpolnjevali list udeleženca (prisotnost na predavanjih, beleženje praktičnih nalog, stalno so se ocenjevale njihove komunikacijske sposobnosti). Prvo izobraževanje je uspešno zaključilo 50 udeležencev. GSS SZD je za zdravnike in zobozdravnike potrdil dodelitev diplom, ki jih je izdalo SZD. S tem je Slovenija dobila prve diplomante s področja medicinskega izvedenstva in zavarovalniške medicine.

Zaključek: Kompleksnost izobraževanja za posebna znanja SZD zahteva odziven in številčen organizacijski odbor ter zadostno število in razpoložljivost mentorjev za praktična znanja. Potrebno je tudi kvalitetno pisno gradivo spredavanih in drugih zahtevanih vsebin izobraževanja. Naslednje izobraževanje bo predvidoma potekalo leta 2022.

Projekt zgodnje poklicne in zaposlitvene rehabilitacije v procesu vračanja na delo

Avtor: Metka Teržan, dr. med., spec. med. dela, prometa in športa, Univerzitetni rehabilitacijski inštitut Republike Slovenije – Soča, Center za poklicno rehabilitacijo, Slovenija

Soavtorici: mag. **Valentina Brecelj,** Razvojni center za zaposlitveno rehabilitacijo, Univerzitetni rehabilitacijski inštitut Republike Slovenije – Soča, Slovenija,
Nuša Kerč, Center za poklicno rehabilitacijo, Univerzitetni rehabilitacijski inštitut Republike Slovenije – Soča, Slovenija

Ključne besede: celostna poklicna rehabilitacija, medinstitucionalno sodelovanje med inštitucijami/resorji, zgodnje vračanje na delo

Ozadje: V Sloveniji se povečujejo negativni kazalniki zdravstvenega stanja delavcev, predvsem bolniški stalež in invalidske upokojitve različnih stopenj. Razloge najdemo predvsem v povečevanju izključenosti delavcev z okvarami zdravja s trga dela in staranju delovne populacije. Dolgoletno nespremenjeno stanje terja ukrepe na nacionalnem nivoju.

Metode: Na pobudo Ministrstva za delo, družino, socialne zadeve in enake možnosti se je maja 2020 pod vodstvom strokovnega tima URI – Soča, pričel projekt Zgodnja poklicna in zaposlitvena rehabilitacija v procesu vračanja na delo, ki ga sofinancirata Republika Slovenija in Evropska unija iz Evropskega socialnega sklada. Osrednja aktivnost projekta je pilotno testiranje novega celostnega modela poklicne in zaposlitvene rehabilitacije.

Rezultati: Projekt je v fazi priprave izvedbe pilotnega projekta. Za uspešno izvajanje projektnih aktivnosti in nadgradnjo obstoječega modela poklicne rehabilitacije, smo zaposlili 5 strokovnih delavcev. Štirje predstavljajo Vstopno informacijsko-koordinacijsko točko za zavarovance in delodajalce, ki bo skrbela za podajanje relevantnih informacij ter vodenje posameznih primerov v pilotnem projektu. Nalogo sodelovanja z odločevalci, medsektorskega povezovanja in nenazadnje graditve širšega družbenega konsenza, je prevzela sodelavka za odnose z odločevalci. Izdelana je bila analiza stanja na področju poklicne rehabilitacije v Sloveniji, v Nemčiji in na Nizozemskem, ki predstavlja dodatna strokovna izhodišča. Pripravljena so tudi orodja za sprotno evalvacijo pilotnega projekta. Oblikovali smo spletno stran projekta in promocijska gradiva ter projekt predstavili na več strokovnih srečanjih. Na sestankih razvojne skupine in spletnemu seminarju smo se srečali z najpomembnejšimi strokovnimi delavci, ki bodo ključni v izvajanju pilotnega projekta.

Spoznanja: Že v pripravljalni fazi projekta smo se zavedali, da bo doseganje glavnega cilja projekta izjemno zahtevno. Posega na področje zakonodaje Zavoda za pokojninsko in invalidsko zavarovanje Slovenije, Zavoda RS za zaposlovanje in Zavoda za zdravstveno zavarovanje Slovenije oziroma njihovih resornih ministrstev. Zahteva vključevanje in predanost strokovnih delavcev različnih področij, predvsem pa zdravnikov, specialistov medicine dela, prometa in športa, ki so trenutno osredotočeni predvsem na druge zadolžitve. Zastavljeni cilj bomo lahko dosegli zgolj s tesnim sodelovanjem in prilagajanjem vseh vpletenih.

Kostno-mišična obolenja in ocenjevanje delazmožnosti

Avtor: prim. mag. **Lidija Plaskan,** dr. med., spec. fiz. in rehab. med., Splošna bolnišnica Celje, Oddelek za medicinsko rehabilitacijo, Slovenija

Ključne besede: kostno-mišična obolenja, dejavniki tveganja, ocena delazmožnosti

Povzetek: Kostno-mišična obolenja (KMO) poznamo že zelo dolgo, danes pa predstavljajo »pandemijo« neslutenih razsežnosti, ki močno vpliva na zdravje, aktivnost in sodelovanje tako posameznika kot družbe v celoti in pomeni veliko breme za zdravstveni sistem.

Kostno-mišična obolenja predstavljajo širok spekter vnetnih in degenerativnih sprememb, ki prizadenejo mišice, tetive, vezi, sklepe, periferne živce in tudi žile in se kažejo z različnimi kliničnimi slikami - od vnetnih sprememb tetiv (tenosinovitisi, epikondilitisi, burzitisi), utesnitve živcev (sindrom zapestnega prehoda, ishialgija), bolečine v križu in osteoartroze.

Najpogosteje prizadeti dela telesa so: križ, vrat, rama in roka, vedno več je tudi bolečinskih sindromov na spodnjem udu.

Njihov skupni imenovalec sta bolečina in motena funkcija, pojavljajo se v vseh starostnih obdobjih in predstavljajo glavni vzrok prizadetosti odrasle populacije.

So najpogostejša z delom povezana zdravstvena težava v EU, zadevajo delavce v vseh sektorjih in poklicih. Poleg vpliva na delavce same, povzročajo tudi visoke stroške podjetjem in družbi.

Približno trije od petih delavcev EU tožijo zaradi KMO, najpogostejši obliki sta bolečina v križu in mišične bolečine v zgornjem udu. Ocenjujejo, da 60 % delavcev v EU prepoznava KMO kot najresnejšo težavo.

Pri oceni delazmožnosti iščemo skladnost med zmožnostjo/zmogljivostjo delavca in zahtevami delovnega mesta, pri tem pa je poleg zdravstvenega stanja zavarovanca potrebno upoštevati njegove biološke in psihofiziološke sposobnosti.

V prispevku so predstavljena najpogostejša kostno-mišična obolenja, posledične funkcijske omejitve ter njihov vpliv na oceno delazmožnosti. Predstavljeni so tudi dejavniki tveganja za razvoj ali poslabšanje KMO.

Ocenjevanje trajnih posledic po poškodbah lokomotornega aparata pri komercialnih zavarovalnicah

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Ključne besede: zavarovalnica, nezgoda, poškodba, invalidnost, gibala

V prispevku je prikazano ocenjevanje trajnih posledic (invalidnosti) po nekaterih poškodbah lokomotornega aparata z vidika pogojev zavarovanja pri treh komercialnih zavarovalnicah v Sloveniji. Zavarovalnice so poimenovane z A, B in C, pri vsaki zavarovalnici so bili upoštevani pogoji zavarovanja za iste funkcionalne posledice iste poškodbe. Vsaka zavarovalnica v pogojih zavarovanja določa različne metode in pristope pri določanju invalidnosti. Tako se za posledice iste poškodbe določajo različni odstotki invalidnosti, ki temeljijo na različnih metodologijah določitve posledic in invalidnosti. Invalidnost po posameznih poškodbah z vidika komercialnih zavarovalnic temelji na zavarovalnih pogojih posamezne zavarovalnice (tabeli invalidnosti in priloženih splošnih pogojih), ki so različni in pogosto povzročajo nerazumevanje zavarovanih oseb pri določitvi končnega odstotka invalidnosti glede funkcionalnih in anatomskih sprememb po posamezni poškodbi. Prikazani so primeri določitve trajnih posledic pri treh zavarovalnicah v Sloveniji po zlomu spodnjega dela koželjnice, rupturi tetiv rotatorne manšete rame in poškodbi kolenskega sklepa z raztrganino sprednje križne vezi in medialnega meniskusa, ki predstavljajo pogoste zahtevke zavarovancev za oceno invalidnosti.

Mišično skeletne bolečine, delovna sposobnost in odsotnost zaradi bolezni pri nas in v svetu, nekoč in danes

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Ključne besede: kronična bolečina, zdravljenje, opioidni analgetiki

Bolečina je eden najstarejših pa tudi najmanj razumljenih problemov v medicini, še posebno s strani zdravnikov. Že 3400 let pred našim štetjem so v starem Egiptu polagali boleče ude v vodo, kjer so bile električne jegulje in ribe, ki so z električnimi sunki blažile bolečine pri poškodbah in artritisu. V srednjem veku so uporabljali široko paleto različnih zelišč. V 17. stoletju so začeli zdravniki v Evropi za blažitev bolečin uporabljati opij. Do l. 1800 sta v uporabo kot anestetika med operacijami prišla eter in kloroform, ki sta omogočila daljše, predvsem pa bolj zapletene kirurške posege brez bolečin za paciente. V začetku 20. stoletja sta prišla v uporabo kot analgetika morfij in heroin, ki sta učinkovito zmanjšala oz. odstranila bolečine, povzročala pa sta tudi hude odvisnosti, kar je postavilo zdravnike pred veliko dilemo, koliko in kateri analgetiki pacientu še koristijo, brez da bi povzročali še večjo škodo za zdravje. Ravno v tem času so se namreč začeli poglobljeno ukvarjati s kronično bolečino, ki ni imela jasnega telesnega vzroka in je bila odvisna od številnih drugih dejavnikov ter se je izkazala za eno najtežje ozdravljivih zdravstvenih stanj. V Ameriki je prišlo do pretiranega predpisovanja in zlorabe opioidnih analgetikov, kar je imelo za posledico veliko odvisnosti, porast depresivnosti in tudi samomorov. Podobne težave se pojavljajo tudi v drugih razvitejših državah, kot so Kanada, Avstralija in Brazilija. V Afriki je velik problem nezadostno ali pa sploh ne-zdravljenje bolečine zaradi slabe dostopnosti zdravil in slabe poučenosti tako zdravstvenih delavcev kot bolnikov. V Evropi in Rusiji pa se vedno bolj uveljavlja multidisciplinarni pristop, kjer se poleg zdravljenja z zdravili uporabljajo ter priporočajo tudi psihoterapija, akupunktura in ostale nefarmakološke metode zdravljenja kronične bolečine. Povsod po svetu se namreč vedno bolj zavedajo, da ima neustrezno zdravljenje kronične bolečine za zdravstveni sistem številne negativne posledice.

Izvedenec v socialnih sporih

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Ključne besede: socialni spor, posebno strokovno znanje, pomočnik sodnika, izvid in mnenje, pravice in obveznosti izvedenca

V prispevku so navedene pravne podlage, ki določajo imenovanje in način dela izvedencev ter njihove pravice in obveznosti v sodnih postopkih, ki obravnavajo socialne spore. V nekaterih sporih je za pravilno ugotovitev dejanskega stanja potrebno posebno strokovno znanje iz drugega, ne pravnega področja, s katerim sodnik ne razpolaga. Na področju socialnih sporov je to zlasti medicinsko področje, saj je za odločitev o nekaterih pravicah iz pokojninskega, invalidskega in zdravstvenega zavarovanja za brezposelnost in še v nekaterih primerih bistveno zdravstveno stanje posameznika in njegov vpliv na funkcioniranje posameznika v domačem in/ali delovnem okolju. Stranki postopka lahko za njegovo pravilno ugotovitev predlagata izvedbo dokaza z izvedencem oziroma se lahko za to odloči tudi sodnik. Izvedenca določi praviloma iz seznama sodnih izvedencev. V kompleksnejših in zapletenih primerih se lahko odloči za imenovanje več izvedencev ali pa izdelavo izvedenskega mnenja poveri strokovni instituciji.

V sklepu o postavitvi izvedenca sodnik določi predmet izvedenskega dela in navede, katera vprašanja so med strankama sporna, predloži mu tudi vse gradivo, zbrano v že izvedenem dokaznem postopku. Mnenje izvedenec pripravi pisno, ali pa ga poda ustno na glavni obravnavi. Pri njegovi izdelavi je izvedenec vezan na abstraktna pravila znanosti in stroke. Mnenje mora biti obrazloženo, jasno in razumljivo tudi laiku. Izvedensko mnenje ni dokaz, ki bo prevladal nad drugimi dokazi.

Predstavljena je tudi sodna praksa, ki se nanaša na delo izvedencev v socialnih sporih.

Trendi pri operativnem zdravljenju hrbtenice – bi se morali izogibati operacijam deformacij pri odraslih?

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Ključne besede: deformacije hrbtenice, deformacije pri odraslih, zdravljenje, kirurško zdravljenje, funkcionalni rezultati

Ozadje/vprašanje/problem: Degenerativne deformacije hrbtenice, ki se pri odraslih pojavljajo »de novo« obsegajo slikovno vidno stenozo, spondilolistezo, rotacijsko subluksacijo, izgubo ledvene lordoze (sagitalno neravnovesje) in osteoporozo; vse to kot posledico asimetričnega posedanja medvretenčnih ploščic. Trideset odstotkov populacije, starejše od 50 let, ima prisotne rentgenske znake degenerativne skolioze. Med 50-letniki brez degenerativne skolioze, se bo ta pojavila pri 37 %, le pri okoli 6 % bo deformacija klinično pomembna. S starostjo se deformacije povečujejo, napredujejo pa praviloma počasi. Medtem ko večino krivin ostane pod 20 stopinjami, imajo krivine, ki so nad 30 stopinj večjo verjetnost poslabševanja, obstajajo pa tudi drugi vzroki poslabševanja. Pomembno je poudariti, da klinična slika, predvsem bolečina, ne korelira z velikostjo deformacije.

Metode: Pojavlja se mnogo dilem, na kakšen način zdraviti degenerativne deformacije hrbtenice. Študije so pokazale, da je operativno zdravljenje simptomatskih degenerativnih deformacij hrbtenice uspešnejše od konzervativnega zdravljenja. Izbira primernega operativnega zdravljenja je zahtevna in odvisna od več parametrov. Odločamo se med dekompresijo nevralnih struktur, hrbtenično zatrditvijo (spondilodezo), korekcijo deformacije in nato med različnimi tehnikami korekcije (sprednja korekcija, zadajšnja korekcija, kombiniran pristop).

Rezultati: Trenutna priporočila predlagajo samo dekompresijo za minimalne deformacije pod 10 stopinj, brez izrazitejše bolečine v križu, z zgolj radikularno bolečino. Za deformacije okoli 20 stopinj predlagajo dekompresijo in kratko spondilodezo brez večje korekcije deformacije. Za deformacije večje od 30 stopinj se ob dekompresiji predlaga polna korekcija s korekcijo tako koronarnega, predvsem pa sagitalnega neravnovesja. Agresivnost kirurškega pristopa poveča tudi možnosti komplikacij, ki so pri večjih korekcijah deformacij ocenjene preko 30 %. Zdravljenje perioperativnih in zgodnjih operativnih komplikacij je zelo pomembno, saj te ne vplivajo na dolgoročno zadovoljstvo pacientov.

Zaključki/spoznanja: Kirurško zdravljenje simptomatskih degenerativnih deformacij hrbtenice ima prednost pred konzervativnim zdravljenjem. Kirurško zdravljenje mora biti temeljito načrtovano in prilagojeno posameznemu pacientu in njegovim težavam. Delovno aktivna populacije s pomembnimi deformacijami hrbtenice tudi po operacijah običajno večjih fizičnih aktivnosti ne zmore, imajo pa pomembno boljšo kvaliteto življenja.

Kirurško zdravljenje in konzervativno zdravljenje ruptur rotatorne manšete

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Ključne besede: rotatorna manšeta, degeneracija, indikacije za operacijo, zdravljenje

Povzetek: Ruptura rotatorne manšete je najpogostejši vzrok za bolečino v rami. Ruptura je največkrat posledica degenerativne bolezni tetiv rotatorne manšete in je močno povezana s staranjem. Naravni potek ruptur tetiv rotatorne manšete gre v smeri povečevanja rupture, napredovanja degeneracije mišic in s tem do postopnega upada funkcije rame. Razumevanje naravnega poteka ruptur rotatorne manšete in zavedanje, da imajo starost pacienta, starost in velikost rupture ter mišična degeneracija vpliv na uspešnost celjenja tetiv, nam pomaga pri odločitvi o načinu zdravljenja. Rupturo rotatorne manšete lahko zdravimo konzervativno ali kirurško. Konzervativno zdravljenje je sestavljeno iz medikamentoznega zdravljenja bolečine in pa fizioterapevtske obravnave. Pri operativnem zdravljenju pa kirurško odprto ali artroskopsko napravimo šiv strgane tetive na kost s pomočjo sider ali kostnih tunelov. Za konzervativno zdravljenje se odločimo, ko gre za manjše delne rupture, obsežne in zastarane rupture (kirurška rekonstrukcija ni več izvedljiva ali pa so pripadajoče mišice preveč degenerirane). Za konzervativno zdravljenje se odločimo tudi pri pacientih, pri katerih zaradi pridruženih bolezni operativni poseg predstavlja previsoko tveganje. Za kirurško zdravljenje pa se odločimo pri večjih delnih rupturah, rupturah čez celotno debelino tetive ter pri masivnih rupturah, kjer mišice še ne kažejo znakov degeneracije. Prav tako se za kirurško zdravljenje odločimo v primeru, kadar bolečina in slaba funkcija vztrajata kljub konzervativnemu zdravljenju. Odločitev o načinu zdravljenja rupture rotatorne manšete mora torej biti individualno prilagojena posameznemu pacientu.

Artroskopija kolka – znaki, pričakovani rezultati in zmožnost vračila na delo

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Ključne besede: kolčna artroskopija, indikacije, prognoza, zmožnost vrnitve na delo

V preteklosti je bilo kirurško zdravljenje kolčnih bolezni in poškodb težavno zaradi kompleksne anatomije kolka in omejenega dostopa do tega sklepa. Nedavni tehnološki napredek je omogočil pregled kolčnega sklepa s kamero. Leta 2004 je bil predstavljen koncept femoroacetabularne utesnitve (angl. Femoro Acetabular Impingement - FAI), ki je danes najpogostejša indikacija za artroskopijo kolka. Od takrat se kolčna artroskopija uporablja kot varna in zanesljiva kirurška metoda za zdravljenje številnih bolezni in poškodb kolka. Med artroskopijo je mogoče zdraviti lezije, ki so vzrok za bolečine, še posebej poškodbe acetabularnega labruma in lezije hrustanca, prav tako pa je možno preprečiti nadaljnjo škodo s preoblikovanjem anatomsko nepravilnih oblik sklepa v biomehansko ugodnejše. Po kolčni artroskopiji in z ustrezno rehabilitacijo je možno izboljšati kakovost življenja, vendar je še vedno nejasno, ali lahko s takim posegom uresničimo glavni cilj zdravljenja, to je upočasniti potek degeneracije oz. preprečiti nastanek artroze. Zapleti med in po artroskopiji kolka niso pogosti, končni rezultati pa niso vedno zadovoljivi. Negativni prognostični dejavniki so predoperativna artroza kolka (II. stopnje ali več), pacientova starost nad 45 let, visok indeks telesne mase (ITM), spregledane strukturne nepravilnosti (tj. acetabularna displazija, FAI ali kombinacija obojega) in podaljšan čas od nastanka težav do operacije. Nekateri navedeni dejavniki zmanjšajo zmožnost vrnitve na delo in v šport, vendar ni jasnih dokazov v literaturi, ki bi to trditev nedvomno potrdili. Po naših izkušnjah in v primerjavi z drugimi sklepi je kolčni sklep tisti, ki zahteva bolj personalizirano in daljšo rehabilitacijo. Paciente, ki so opravili kolčno artroskopijo, je potrebno redno ocenjevati glede njihove sposobnosti toleriranja fizičnih obremenitev na delovnem mestu, predvsem zaradi možnosti razvoja sekundarne artroze, do katere lahko pride kljub operativnemu zdravljenju. Kvalitetne študije kažejo, da je priporočljivo prepoznati tiste klinične, antropometrične in psihološke parametre, ki imajo lahko pomemben vpliv na sposobnost vrnitve na delo in v šport.

Spregledana patologija pri bolnikih s slabšim funkcionalnim izidom po artroplastiki kolena

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Ključne besede: koleno, artroplastika, neuspešno zdravljenje, bolečine

Strokovno sodelovanje: pregled področja

Ozadje: Za razliko od artroplastike kolka, kjer subjektivno zadovoljstvo z umetnim sklepom dosežemo pri več kot 90 % bolnikov, je ta odstotek pri umetnih kolenih precej nižji. Večinoma opazimo, da je povsem zadovoljnih manj kot 80 % bolnikov, pri čemer je večina od manj zadovoljnih še vedno boljših od predoperativnega stanja. Bolniki so večinoma nezadovoljni zaradi bolečine, omejene gibljivosti, nestabilnosti, ali kombinacije vzrokov.

Opredelitev problema: Zamenjava kolenskega sklepa sledi drugačnemu konceptu kot pri kolku. Osnovna razlika je, da s protezami enakih oblik zamenjujemo kolenske sklepe zelo različnih morfologij. Razlogi za težave so različni, večinoma je prisotnih več vzrokov sočasno. Bolečino lahko povzročajo: okužba vsadka, omajan vsadek, nestabilnost umetnega kolena, malpozicija komponent, korozija, metaloza, zlom vsadka, obprotezni kostni zlomi, mehko tkivne okvare okoli sklepa, alergija, referirana hrbtenična bolečina, KREBS, arterijska okluzija, vaskulitisi in drugi redkejši izven sklepni vzroki. Nestabilnost je lahko zaradi primarne okvare ligamentov, neprimerne velikosti in/ali pozicije vsadka, neprimerne izbire vsadka, poškodbe. Omejena gibljivost je lahko zaradi okužbe, neprimerne velikosti in/ali malpozicije vsadka, nagnjenosti k brazgotinjenju - artrofibroze, neprimerne pooperativne rehabilitacije, nesodelovanja bolnika, nevrološke okvare in drugih redkejših vzrokov.

Diagnostika: Iskanje vzrokov za težave je pogosto zelo zahtevno. Včasih predstavlja problem kombinacija manjših odstopanj od optimalnega, ki sama po sebi ne bi povzročila težav, skupaj pa lahko zelo intenzivne. V diagnostiki je potreben algoritmični pristop z izključevanjem najverjetnejših vzrokov.

Reševanje/zdravljenje problema: K operativnemu zdravljenju pristopimo po ugotovljeni najverjetnejši diagnozi. V kolikor diagnoze ne ugotovimo takoj, bolnika ne zdravimo, ampak opazujemo, ker se s časom diagnoza običajno razkrije. Če je problem manj izrazit, zdravljenje pa izrazito invazivno in/ali nevarno, se s pacientom dogovorimo, da ne zdravimo. Sicer pa je za večino problemov možno in tudi smiselno kirurško zdravljenje, če so težave zelo izrazite. Rezultati revizij odpovedanih umetnih sklepov niso ekvivalentni primarnim vstavitvam. Izjemoma je zdravljenje tudi ne operativno.

Patologija stopala in gležnja pri aktivnih bolnikih in rezultati zdravljenja

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Ključne besede: artroza, deformacije, nevropatsko stopalo, hallux valgus, hallux rigidus, tendinopatije, fasciopatije, športne poškodbe, zdravljenje, rehabilitacija, delazmožnost

Ozadje: Patologija na gležnju in stopalu je pogost razlog za kronično bolečino in slabšo funkcijo. Uspešnost zdravljenja ni zagotovljena in dosega 90 %. Čas vrnitve na delo po operaciji in rehabilitaciji praviloma znaša 3 do 6 mesecev, še posebej če gre za delavca s pretežno stoječim delom in večjimi fizičnimi obremenitvami.

Pregled patologije, zdravljenje in rehabilitacija: Najpogostejše nepravilnosti na stopalu so deformirani prsti in obraba palca. Blažje oblike zdravimo konservativno, priporočamo udobno obutev, sicer indiciramo operativno korekcijo, ki pri stoječih delih zahteva 3 mesečni bolniški stalež. Pri obrabi gležnja in sklepov stopala s primerno obutvijo pogosto nekoliko odložimo operativni poseg. Če je potreben, največkrat prizadete sklepe zatrdimo. Proces celjenja je dolgotrajen, zato je polna obremenitev mogoča šele po 6 mesecih. V primeru akutnih športnih poškodb, kot so zvini in raztrganine vezi, lahko pričakujemo trajanje zdravljenja do 6 tednov. Kadar je potrebno operativno zdravljenje, je vrnitev na delo mogoča šele po 3 do 5 mesecih. Kronične bolečine v predelu pete so posledica trajnih preobremenitev, kar povzroči ireverzibilne spremembe v Ahilovi tetivi, insercijski tendinitis in plantarni fascitis. Konservativni pristop je uspešen v 70-90 %, sicer lahko predel razbremenimo kirurško, takrat rehabilitacija traja do 6 mesecev. Nevropatske spremembe na stopalu so neozdravljive narave in jih povzroča diabetes, etilizem, polinevropatija in drugi sistemski dejavniki. Simptome relativno uspešno blažimo konservativno ali s kompleksno kirurško obravnavo. Čas rehabilitacije je nepredvidljiv, prognoza je srednjeročno slaba, posledica je trajna invalidnost.

Zaključek: Patologija na gležnju in stopalu, kljub navidezno marginalni problematiki, bistveno vpliva na delazmožnost pri aktivnih bolnikih. V kolikor s konservativnim pristopom nismo uspešni, vse pogosteje priporočamo kirurško zdravljenje. Ta nemalokrat terja večmesečno rehabilitacijo, saj gre za dobro oživčeno in slabo prekrvavljeno področje s tankim kožnim pokrovom. To otežuje celjenje kože, oteklina vztraja več tednov, proces regeneracije vezi, kosti ali sklepov zato traja več mesecev.

Napovedni dejavniki delazmožnosti pri težavah z ledveno in vratno hrbtenico

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Univerzitetni klinični center Maribor, Slovenija

Ključne besede: bolečina v križu in vratu, biopsihosocialna obravnava, delazmožnost

Bolečine v križu in vratu (BKV) pomembno vplivajo na zdravje in funkcioniranje ljudi ter predstavljajo veliko breme javnega zdravja. Prevalenca za kronično bolečino v križu je približno 23 %, za bolečino v vratu pa okrog 13 %. BKV so najpogosteje prisotne pri delovno aktivnih ljudeh med 25. in 64. letom in sodijo med pogoste vzroke za bolniško odsotnost. Akutne BKV imajo običajno benigen značaj in spontano minejo pri 90 % bolnikov znotraj 6 do 8 tednov, pri cca. 10 % se lahko razvijejo v kronično obliko. BKV neposredno vplivajo na stroške zdravstvene oskrbe in sočasno povzročajo tudi bistveno večje sekundarne stroške zaradi odsotnosti z dela, upada delovne učinkovitosti, predčasne upokojitve in funkcionalne oviranosti. Pri tistih bolnikih, kjer traja zmanjšana zmožnost več kot eno leto, se na svoje delovno mesto vrne manj kot 50 % bolnikov in skoraj nobeden, kadar zmanjšana zmožnost traja 2 ali več let. Najpogostejša rizična faktorja za pogoste bolniške staleže pri BKV sta administrativno delo in pogoste predhodne epizode.

Dejavniki tveganja za BKV so starost, spol, telesna dejavnost, preobremenitev, debelost in kajenje. Eden izmed glavnih dejavnikov, ki vplivajo na delazmožnost pri težavah s hrbtenico, je bolečina. Številne randomizirane kontrolirane so dokazale, da z interdisciplinarno biopsihosocialno obravnavo (BPSO) lažje vplivamo na bolečine in hitreje izboljšamo funkcioniranje bolnikov kot s klasično fizikalno terapijo. BPSO ima pozitiven vpliv tudi na trajanje bolniškega staleža. Pri kroničnih bolnikih z BKV se lahko dodatno razvije depresija, hipohondrija, somatizacija, kineziofobija in katastrofizacija.

Med negativne napovedne dejavnike delazmožnosti pri BKV sodijo tudi neučinkovito zdravljenje, neaktivnost, vztrajanje pri škodljivem življenjskem slogu in nemotiviranost bolnika. Pozitivni napovedni dejavniki za zmanjšanje bolniškega staleža zaradi BKV so motivacija za delo, dobri delovni pogoji in odnosi na delu ter dinamični delovni postopki. Z dokazi podprta sekundarna preventiva vključuje interdisciplinarno BPSO in nasvete za aktivni življenjski slog.

Poklicna rehabilitacija v obliki prilagoditve delovnega mesta

Avtor: Peter Šalej, dipl. upr. org., Zavod za pokojninsko in invalidsko zavarovanje Slovenije, Slovenija

Ključne besede: delovni invalid, poklicna rehabilitacija in prilagoditev delovnega mesta

Zavarovanci, pri katerih nastane sprememba v zdravstvenem stanju zaradi bolezni ali poškodbe, lahko delno ali v celoti izgubijo delovno zmožnost. Popolna nezmožnost za organizirano in pridobitno delo vodi v invalidsko upokojitev, ki je zadnji ukrep invalidskega varstva. V kolikor ima zavarovanec še vedno preostalo delovno zmožnost, mu je s pomočjo instituta poklicne rehabilitacije vredno iskati možnosti pridobitve oziroma ohranitve zaposlitve.

Poklicna rehabilitacija ne sme biti statična oblika pomoči delovnim invalidom, temveč zahteva nujno prilagoditev organiziranosti delovnih procesov.

Ob osamosvojitvi smo v Sloveniji poznali pravico do prekvalifikacije oziroma dokvalifikacije, ki je bila potrebna, da je lahko zavarovanec opravljal drugo ustrezno delo. V letu 1992 je bil uveljavljen nov, prvi samostojen in celovit slovenski sistem pokojninskega in invalidskega zavarovanja, ki pa je navedeno pravico samo preimenoval v pravico do poklicne rehabilitacije. Korenita sprememba na tem področju je bila izvedena v letu 2000 z Zakonom o pokojninskem in invalidskem zavarovanju (ZPIZ-1), ki jo poleg namena in obveznosti opredeljuje kot temeljno pravico in obveznost delovnega invalida. Definira jo kot celostni proces, v katerem se zavarovanec ne samo strokovno, fizično in psihosocialno usposobi za drug poklic ali delo, temveč se lahko usposobi za opravljanje istega poklica ali dela, tako da se mu prilagodi delovno mesto z ustreznimi tehničnimi pripomočki. ZPIZ-2 v letu 2013 povzema definicijo in razširja načine poklicne rehabilitacije s kratkotrajnim usposabljanjem in izobraževanjem (tečaji), kot tudi zvišuje starostno mejo za pridobitev pravice, to je 55 let starosti oziroma 50 let starosti, če bo zavarovanec delo po končani rehabilitaciji opravljal s krajšim delovnim časom.

Če se zakonodajalec približuje strukturi in organiziranosti delovnih procesov, to ni mogoče v celoti trditi za strokovni pristop prepoznavanja najugodnejših oblik oziroma načinov poklicne rehabilitacije. Zavod ima interes, da se daje prednost prilagoditvi delovnega mesta, kratkotrajno usposabljanje in izobraževanje oziroma usposabljanje na konkretnem delovnem mestu.

Vzdrževanje delazmožnosti zaposlenih skozi promocijo zdravja pri delu: primeri iz prakse

Avtor: asist. **Davor Denkovski,** dr. med., spec. med. dela, prometa in športa, Zavod za atraktivno promocijo zdravja, Slovenija

Ključne besede: promocija zdravja pri delu, vzdrževanje delazmožnosti, primeri dobre prakse, medicina dela, prometa in športa

Izvleček: Promocija zdravja pri delu (PZD) je prizadevanje delodajalcev, delavcev in družbe izboljšati zdravje in blaginjo ljudi pri delu. Skrb za zdravje zaposlenih je tudi primarna skrb in naloga specialista medicine dela, zato ima slednji pri promociji zdravja pri delu zelo pomembno vlogo. Med poglavitne aktivnosti sodijo analiza zdravja zaposlenih in analiza tveganj v zvezi z delom, sodelovanje pri načrtovanju ukrepov in nekatere druge aktivnosti. Z letošnjim letom mineva 10 let, odkar je promocija zdravja pri delu v Sloveniji postala tudi zakonska obveza. Skladno z Zakonom o varnosti in zdravju pri delu (ZVZD-1), morajo delodajalci promocijo zdravja pri delu načrtovati in izvajati. V prispevku pogledamo, kako se področja lotevajo delovne organizacije in predstavimo nekatere primere dobre prakse.

Vloga Komisije za fakultetna izvedenska mnenja MF UL v izvedenskem procesu ocenjevanja delazmožnosti

Avtor: prof. dr. **Jože Balažic,** dr. med., višji zdravnik spec. za sodno medicino, Univerza v Ljubljani, Medicinska fakulteta, Katedra za sodno medicino in deontologijo in Inštitut za sodno medicino, Slovenija

Ključne besede: medicinsko izvedenstvo, delazmožnost, ocenjevanje

Komisija za fakultetna izvedenska mnenja pri Medicinski fakulteti Univerze v Ljubljani v svoji dolgoletni izvedenski praksi opravlja najzahtevnejše izvedensko delo. Komisija je telo Senata MF UL in jo v osnovi sestavljajo najkompetentnejši strokovnjaki iz področja sodne medicine, travmatologije (splošne kirurgije), ortopedije in psihiatrije. Komisijo vodi predsednik s štiriletnim mandatom, ki v skladu z zahtevami sodišč ali drugih državnih organov imenuje strokovnjake, ki bodo izvedensko nalogo opravili. Komisija se pri svojem delu v sorazmerno veliki meri srečuje s sklepi za izvedensko delo iz področja, ki ga pokriva Delovno in socialno sodišče s svojimi enotami. Problemi, ki jih obravnava komisija, so predvsem iz področja delovno pravne zakonodaje in sicer ocena delazmožnosti, izvedenstvo iz področja stopnje invalidnosti in njene pravilne ocene, nadalje je prisoten del izvedenstva iz področja upravičenosti do bolniškega staleža ter upravičenosti do povrnitve stroškov zdravljenja v tujini. Glede na omenjena področja po prejemu sodnih zahtev predsednik razporeja sodne spise izvedencem oziroma strokovnjakom, ki so potrebni za podajo izvedenskega mnenja.

Rezultati: v letu 2019 je komisija obravnavala 96 izvedenskih primerov preko Delovnega in socialnega sodišča ter 52 dopolnilnih mnenj z eno ali večimi dopolnitvami glede na pripombe strank v postopku. Iz povratnih informacij, ki so bile dosegljive predsedniku komisije, se je sodišče v 99 % držalo vsebine podanih izvedenskih mnenj in njihovih dopolnitev, v 1 % pa se je sodišče odločilo na zahtevo strank v postopku za drugega izvedenca in sicer za izvedenca iz tujine.

Zaključek: Komisija za fakultetna izvedenska mnenja se iz leta v leto srečuje z močno povečanimi zahtevami po izvedenskem delu na najvišji strokovni ravni s strani delovnih in socialnih sodišč, kar nedvomno kaže na vedno večjo kompleksnost in zapletenost tovrstnega izvedenstva.

Epidemiologija kostno-mišičnih obolenj delovno aktivne populacije v Sloveniji

Avtorici: Ada Hočevar-Grom, dr. med., spec. med. dela prometa in športa in spec. javnega zdravja, Nacionalni inštitut za javno zdravje, Slovenija, dr. **Ticijana Prijon**, dr. med., spec. druž. med., Nacionalni inštitut za javno zdravje, Slovenija

Ključne besede: kostno-mišična obolenja, epidemiologija, zdravstveni absentizem

Ozadje: Kostno-mišična obolenja (KMO) so v Sloveniji velik zdravstveni problem, saj so najpogostejša z delom povezana zdravstvena težava. Pojavnost KMO povezujemo z degenerativnimi procesi staranja, pa tudi kot posledico spremenjenega načina življenja in dela, slabega življenjskega sloga, epidemije debelosti in premajhne telesne aktivnosti v delovno aktivni populaciji. Pričakujemo, da bodo KMO, predvsem zaradi povečane intenzitete dela in podaljšanja delovne dobe, ostala vodilni vzrok zdravstvenega absentizma in delovne invalidnosti.

Metode: Epidemiologijo KMO smo opredelili preko kazalnikov bolniškega staleža (BS). Analizirali smo trende gibanja BS zaradi KMO od leta 2015 do leta 2019 glede na spol in starost, po gospodarskih dejavnostih in območnih enotah ZZZS.

Rezultati: KMO so vzrok za več kot 20 % vseh izgubljenih delovnih dni iz zdravstvenih razlogov, trend rasti BS zaradi KMO pa v zadnjih letih skokovito narašča. V opazovanem obdobju se je odstotek BS za vse vzroke začasne nezmožnosti za delo skupaj povečal za dobrih 18 %, zaradi KMO pa kar za 43 %. Naraščanje BS zaradi KMO beležimo predvsem v ženski populaciji. Od leta 2015 do leta 2019 se je število izgubljenih dni na zaposlenega pri ženskah povečalo za 55 %, pri moških pa za 29 %. Incidenca KMO se s starostjo povečuje in je najvišja v starostni skupini od 45 do 64 let, trajanje BS pa je najdaljše pri zaposlenih, starih 65 let in več. Že vrsto let je najvišji delež BS zaradi KMO v rudarstvu, kmetijstvu, zdravstvenem in socialnem varstvu ter v predelovalni dejavnosti. Največjo pojavnost KMO po OE ZZZS ugotavljamo v OE Krško, Ravne na Koroškem in Murska Sobota, najnižjo pa v OE Nova Gorica in Ljubljana.

Zaključki: Za spopad z rastočo pandemijo KMO je potrebno uvesti sistemske ukrepe, ki bodo usmerjeni v preprečevanje in obvladovanje KMO ter zagotoviti ustrezno rehabilitacijo in reintegracijo delavcev z znanimi KMO na ustrezna delovna mesta.

Klinični izid po periacetabularnih osteotomijah in drugih ohranitvenih posegih na kolku

Avtor: René Mihalič, dr. med., spec. ortoped. krg., Ortopedska bolnišnica Valdoltra, Slovenija

Ključne besede: kolčni sklep, osteotomija, ohranitvena kirurgija, klinični izid

Strokovno sodelovanje: Medacta International Switzerland - svetovalec

Ozadje: Cilj ohranitvenih posegov na kolku je izboljšati skladnost sklepnih površin in s tem optimizirati razporeditev sil, ki se generirajo znotraj sklepa. Posledica je zmanjšanje bolečin in izboljšanje kvalitete življenja ter upočasnitev obrabe.

Metode: Analizirali smo podatke v literaturi in v Ortopedski bolnišnici Valdoltra, s fokusom na izidih zdravljena po periacetabularni osteotomijah (PAO), s katerimi razrešujemo problem displastičnih acetabulov, po korektivnih osteotomijah (OT) proksimalne stegnenice, s katerimi razrešujemo prirojene ali pridobljene deformacije proksimalne stegnenice ter po posegih, ki odpravljajo femoro-acetabularno utesnitev (FAI), predvsem tipa CAM, kjer izvedemo ablacijo naplastitve na vratu stegnenice, ki je razlog utesnitve. Povzeli smo tudi priporočila v zvezi s pooperativno rehabilitacijo in aktivnostmi.

Rezultati: PAO
V povprečju se klinični izid izboljša za 40 % do 60 %, glede na predoperativno stanje, oziroma doseže nivo med 85 % in 90 % zdravega sklepa. Prve tri mesece po operaciji bolniki uporabljajo bergle. Prvi mesec zgolj polagajo operirano okončino ob podlago, nato jačajo obremenitev 5-7 kg na teden, do polne obremenitve. Vrnitev na delo, če ni fizično intenzivno, je možna 3 mesece po posegu, če je OT zaceljena. Obremenitve brez omejitev so možne po 6-12 mesecih.

Korektivne OT proksimalne stegnenice
Pooperativni izid je močno odvisen od obsega sklepne prizadetosti. V povprečju se klinični izid izboljša za več kot polovico, glede na predoperativno stanje, oziroma doseže nivo med 80 % in 90 % zdravega sklepa. Pooperativni protokol je identičen tistemu po PAO.

FAI-CAM
V povprečju se klinični izid izboljša za več kot 90 %, glede na predoperativno stanje oziroma doseže nivo okrog 95 % zdravega sklepa. Prvi mesec je priporočena uporaba bergel z obremenitvijo do bolečine. Po tem je tudi možna vrnitev na delo, če ni fizično intenzivno. Po 3 mesecih ni omejitev glede aktivnosti.

Zaključki: Glede na podatke v literaturi, ki so povsem primerljivi s podatki pridobljenimi v naši ustanovi, so ohranitveni posegi na kolku ob pravilni indikaciji zelo uspešni in odložijo potrebo po vstavitvi endoproteze.

Artroplastika kolka in delazmožnost

Avtor: doc. dr. **Tomaž Tomažič,** dr. med., spec. ortoped. krg., Zavod za pokojninsko in invalidsko zavarovanje Slovenije IK Maribor, SBMS, SBP

Ključne besede: kolčna endoprotika, zaposleni, delazmožnost

Endoprotetika je eden najuspešnejših posegov v medicini. Indicirana je pri bolnikih z omejeno gibljivostjo kolka in bolečino pri hoji zaradi napredovale obrabe, ko je konzervativna terapija izčrpana in ohranitveni posegi neuspešni ali zamujeni. Najpogostejši razlogi za endoprotetiko so primarna simptomatska obraba, displazija, popoškodbena stanja in aseptična nekroza. Kljub dobremu funkcionalnemu rezultatu je njena slaba stran postopno omajanje endoproteze, ki vodi v bistveno zahtevnejši revizijski poseg, zato je pri mlajših in aktivnih odločitev o endoprotetiki še zahtevnejša.

V desetletnem obdobju med 2010-19 je bilo na invalidskih komisijah ZPIZ Slovenije 6823 ocen zaradi obrabe kolka z endoprotetiko, kar predstavlja 25 % lokomotorne patologije. V povprečju je bilo 682 ocen letno, s trendom porasta od 530 na 670 v zadnjih petih letih. Vzrok endoprotetike je bil v 74 % primarna, 12 % displastična, 8 % popoškodbena in 6 % sekundarna obraba. Obojestranska patologija je bila prisotna v 35 %. Starost ob posegu je bila v 64 % pod 55 leti, v 63 % pa je bila patologija ob oceni v nasprotju s splošno pojavnostjo prisotna pri moških. 60 % zavarovancev je opravljalo težka in zelo težka fizična dela. Zavarovanci so bili v 44 % zmožni za polni delovni čas z omejitvami, v 30 % za delo v krajšem delovnem času, v 14 % pa so bili ocenjeni kot pridobitno nezmožni oziroma nezmožni za poklicno rehabilitacijo. Le v 2 % je bila opravljena poklicna rehabilitacija, pri ostalih pa zdravljenje ob oceni še ni bilo zaključeno.

Pomembni vpliv na zaposljivost po endoprotetiki ima predoperativna bolniška odsotnost, poklicni status in debelost, pooperativno pa stopnja bolečine, mobilnost, zadovoljnost s posegom in pogoji na delovnem mestu. Najpogosteje zavarovance po oceni premestimo na drugo delo z omejitvami, ker pa je večina ob implantaciji mlajša od 55 let, bi bila smiselna prilagoditev delovnega mesta. V primeru resnejšega funkcionalnega deficita ali obojestranske endoprotetike, pa prihaja v poštev skrajšava delovnega časa in omejitve, ko so potrebne.

Razlogi za revizijo kolčne endoproteze in funkcionalni rezultati

Avtorja: prof. dr. **Drago Dolinar,** dr. med., spec. ortoped. krg., Univerzitetni klinični center Ljubljana, Ortopedska klinika, Slovenija, asist. dr. **Boštjan Kocjančič,** dr. med., spec. ortoped. krg., Univerzitetni klinični center Ljubljana, Ortopedska klinika, Slovenija

Ključne besede: kolčna endoproteza, revizija, zapleti, omajanje, funkcionalni rezultat

Na Ortopedski kliniki v Ljubljani v zadnjih letih opravimo do 80 revizijskih operativnih posegov kolčnih endoprotez letno. Najpogostejša vzroka za revizijo sta aseptično omajanje in okužba vsadka. Najpogostejša kratkoročna zapleta po vgradnji kolčne endoproteze sta okužba in izpah, med dolgoročnimi vzroki za revizijo pa zlasti velja omeniti aseptično omajanje umetnega kolčnega sklepa, zaradi katerega je potrebna zamenjava enega ali obeh delov endoproteze.

Aseptično omajanje endoproteze je izguba učvrstitve endoproteze v kostnem ležišču. Najpogosteje je posledica obrabe komponent endoproteze in posledične osteolize. Danes je znano, da večino delcev, izoliranih v tkivu ob kolčni endoprotezi, sestavljajo delci polietilena. Le ti nastajajo zaradi trenja mobilnih delov proteze in obrabe polietilenskega acetabularnega vložka, tako da govorimo o »bolezni polietilenski delcev«, ki so glavni vzrok aseptičnega omajanja umetnega kolčnega sklepa. Drugo etiologijo predstavljajo slaba začetna stabilnost vsadka, slab vsadek (neustrezna geometrija in površinska obdelava vsadka) in posledično neuspešna osteointegracija vsadka, slaba oziroma nepravilna vgradnja vsadka med operacijo ter dejavniki vezani na bolnika (teža, stopnja aktivnosti).

Okužba endoproteze kolka predstavlja redek zaplet od 0,4 % do 1,5 % primerov po primarni zamenjavi kolčnega sklepa. Kljub redkosti je resen zaplet, ki lahko privede do izgube funkcije sklepa. Takšne okužbe zahtevajo dolgotrajno zdravljenje z antibiotiki, pogosto odstranitev ali menjavo endoproteze, podaljšano bivanje v bolnišnici ter daljšo in zahtevnejšo rehabilitacijo, kar vse znatno poveča stroške zdravljenja.

Incidenca izpahov kolčnih endoprotez se giblje do 2 % primerov po primarni zamenjavi kolčnega sklepa. Zaplet je najpogostejši v prvih treh mesecih oziroma do enega leta po posegu. Dejavniki tveganja so neustrezna vgradnja komponent endoproteze, tip vsadka (velikost stegnenične glave), stanje mehkih tkiv, izbira kirurškega pristopa. V primeru ponavljajočih se izpahov je potrebna operativna revizija komponent endoproteze.

Razlika v dolžini nog je eden od glavnih razlogov za nezadovoljstvo bolnikov po vgradnji kolčne endoproteze. Zaradi večje neenakosti v dolžini nog (≥ 1,5 cm) se pri bolniku pojavi šepanje, bolečina v hrbtenici, potreba po opori pri hoji. V teh primerih najpogosteje svetujemo uporabo petnega vložka na strani prikrajšave.
Obprotezni zlomi predstavljajo redek zaplet z incidenco manj kot 1 %. Običajno je potrebno kirurško zdravljenje z osteosintezo, če je proteza ob tem še omajana, je potrebna tudi menjava endoproteze.

Incidenca zlomov predvsem stegnenič nih komponent endoproteze je nizka, ocenjena na pod 0,27 %. Pojavljali so se predvsem pri modularnih stegnenič nih komponentah z izmenljivim vratom pri bolnikih s povečano telesno težo in visoko stopnjo aktivnosti.

Pojavnost heterotropnih osifikacij po artroplastiki kolka je redka, nekoliko pogostejša v primerih popoškodbene obrabe in pri moških. Bolnike moti slabša gibljivost, bolečina je redkejša, velik delež bolnikov je asimptomatski. Obsežnejše heterotropne osifikacije povzročajo bolečino in hudo okorelost sklepa. V teh primerih je potrebna kirurška odstranitev osifikacij.

Po primarni ali revizijski operaciji kolčne endoproteze naj bo ocena delovne sposobnosti zavarovanca individualna, glede na njegovo psihofizično kondicijo in funkcionalni status operiranega kolčnega sklepa. Običajno so bolniki dva do tri mesece po zamenjavi kolka z umetnim, ponovno sposobni opravljati lažja, pretežno sedeča oziroma delno stoječa dela, brez prenašanja težjih bremen, ukvarjajo pa se lahko tudi z lažjimi, funkcionalnemu statusu prilagojenimi športnimi aktivnostmi (kolesarjenje, nordijska hoja, plavanje ...).

Zahtevnejše primarne implantacije kolčnih endoprotez

Avtor: prim. **Slavko Kramberger,** dr. med., spec. ortoped. krg., Splošna in učna bolnišnica Murska Sobota, Slovenija

Ključne besede: endoproteza kolka, displazije kolka, popoškodbene deformacije, načrtovanje operacij

Implantacije totalnih kolčnih endoprotez (TEP) so v velikem odstotku uspešni operativni postopki, ki pacientom zmanjšajo stopnjo bolečine in v veliki meri povrnejo funkcionalnost sklepa. Implantacije TEP kolka se uspešno izvajajo v večini slovenskih bolnišnic. Indikacije za operativni poseg so primarne in sekundarne artroze kolčnega sklepa, nemaligni tumorji proksimalne metafize stegnenice, nekateri zlomi vratu stegnenice, peritrohanterni prelomi in zlomi tudi v proksimalni tretjini stegnenice (običajno v kombinaciji z artrozo kolčnega sklepa).

Primarna implantacija kolčne endoproteze je rutinski kirurški poseg. V primerih spremenjenih anatomskih pogojev tako na femoralni kot na acetabularni strani, pa je lahko zahtevnost uspešne implantacije TEP bistveno večja.

Primarne implantacije TEP pri mladostnikih so zlasti zahtevne zaradi običajno izrazitih anatomskih nepravilnosti:

- sekundarne artroze zaradi displazij kolčnega sklepa,
- stanja po neuspešno zdravljenih kongenitalnih izpahih sklepa,
- sekundarne artroze pri juvenilnem revmatskem artritisu, prebolelih bakterijskih artritisih,

stanja po poškodbah ali boleznih (Mb. Perthes, epifiziolizah glavice kolka, ICP...).

Pri aktivnih zavarovancih lahko zahtevnejše implantacije TEP pričakujemo pri nekaterih sekundarnih artrozah (po avaskularni nekrozi glavice kolka, po prebolelih vnetjih kolčnega sklepa, popoškodbeni artrozi, stanja po prirojenih izpahih ali displazijah, po artrodezah sklepa, osteopetrozi...), pri anatomskih anomalijah v acetabularnem ali femoralnem delu (varus, valgus, retroverze acetabula, deformacije velikega trohantra...).

Zahtevnost primarne implantacije TEP kolka lahko povečajo tudi spinopelvične anomalije, stanja po spondilodezah ledveno-sakralne hrbtenice, stanja po prelomih medenice in križnice.

Načrtovanje takih posegov zahteva tudi razširjeno diagnostiko (CT, MR, RTG slikanja celotne hrbtenice, 3D tiskanja, digitalne šablone, 3D šablone za osteotomije, navigacija), obsežnejšo pripravo pacienta na poseg, načrtovanje ustreznih implantatov in obsežnejšega operativnega instrumentarija.

Zdravljenje pogosto zahteva interdisciplinaren pristop (mikrobiologi, infektologi, travmatologi, revmatologi, klinični farmacevti, anesteziologi, kirurgi plastiki, internisti...).

Pooperativno je zahtevnejša tudi nega in rehabilitacija pacientov. Več je pooperativnih zapletov.

Pri aktivnih zavarovancih se morajo podati tudi mnenja o delazmožnosti oz. o stopnji preostale invalidnosti. V primerih popoškodbenih artroz in zdravljenja z implantacijami TEP kolkov, se občasno zahteva tudi medicinsko sodno izvedenstvo operaterja.

Poklicna rehabilitacija pacientke po invazivnem zdravljenju kostnega raka stegnenice

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Soavtorja: prim. **Bojan Pelhan,** dr. med., spec. med. dela, prometa in športa, Univerzitetni rehabilitacijski inštitut Republike Slovenije – Soča, Center za poklicno rehabilitacijo, Služba Ljubljana, Slovenija,
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Ključne besede: primer iz prakse, poklicna rehabilitacija, prilagoditev delovnega mesta

Ozadje: V predstavitvi podajamo sistematičen prikaz postopka poklicne rehabilitacije pacientke po zdravljenju kostnega raka stegnenice. Poudarek je na povezovanju in sodelovanju različnih strokovnih služb in vključevanju delodajalca kot aktivnega partnerja v procesu.

Metode: Predstavitev usmerjene timske obravnave in oblikovanja načrta vračanja na delo skozi primer dobre prakse.

Rezultati: 42-letna pacientka, po izobrazbi ekonomsko-komercialni tehnik, 22 let je pri istem delodajalcu opravljala administrativno delo, nazadnje na delovnem mestu asistentke področja (tajnica). Februarja 2016 je bila operirana zaradi osteosarkoma desne stegnenice, vstavljena tumorska edoproteza, sledilo je zdravljenje s kemoterapijo. Januarja 2018 je bila obravnavana v URI – Soča, Centru za poklicno rehabilitacijo. Rehabilitacijski tim je ugotavljal večja odstopanja v vzdržljivosti pri delu, predvsem pa tudi utrujanje in težave pri gibanju zaradi okvare kolka. Med obravnavo se je soočala s spremembami delovnega funkcioniranja in čustvenimi stiskami, ki so jo dodatno izčrpavale. V okviru obravnave je bila usmerjena v Dom IRIS, kjer si je ogledala in preizkusila različne pripomočke in tehnološke rešitve za pomoč v domačem in delovnem okolju. Opravila je tudi ocenjevanje vozniških sposobnosti v Ambulanti za voznike s posebnimi potrebami.
Zaradi dolgotrajnega bolniškega staleža in trajne zmožnosti za delo, se je na predlog pacientkinega osebnega zdravnika začel postopek za priznanje pravic iz invalidskega zavarovanja. Pacientka in delodajalec sta v postopku izrazila interes za poklicno rehabilitacijo, zato jo je maja 2019 predsednik invalidske komisije napotil v obravnavo v URI – Soča za pripravo strokovnega mnenja. Strokovni tim je v sodelovanju z delodajalcem v končnem poročilu januarja 2020 predlagal poklicno rehabilitacijo, usposabljanje s praktičnim delom na ustreznem delovnem mestu, sočasno še kratkotrajno izobraževanje ter prilagoditev delovnega mesta.

Spoznanja: Primer iz prakse opisuje delovno funkcioniranje pacientke iz obdobja pred boleznijo, med zdravljenjem, do obravnave v rehabilitacijskem timu URI – Soča, poklicne rehabilitacije ter po njej. Celoten postopek je odraz trenutnega delovanja in sodelovanja pristojnih služb, ko se med seboj prepletajo različni postopki in sistemi.

Minimalno invazivni posegi pri bolečini v spodnjem delu hrbta

Avtor: Attila Szunyog, dr. med., spec. ortoped. krg., Splošna in učna bolnišnica Murska Sobota, Slovenija

Ključne besede: infiltracijska terapija, fasetna blokada, nukleoplastika, vertebroplastika, biopsija

Namen prispevka je predstavitev minimalno invazivnih tehnik, ki se uporabljajo pri diagnostiki in tudi zdravljenju bolečin v ledvenem delu hrbtenice. Nekatere med njimi so nujno potrebne diagnostične metode, kot npr. biopsija vretenc pri spremembah, ki zahtevajo histološko diagnostiko. Preiskava npr. provokativna diskografija, ki je predvsem pomembna pri diagnostiki t. i. diskogene bolečine, se v dobri meri opušča zaradi dokazane poškodbe anulus fibrozusa oz. vezivnega obroča medvretenčnega diskusa. Pomemben poseg predstavlja ablacija fasetnih sklepov, saj je istočasno diagnostična in tudi terapevtska metoda. Pri pacientih, ki imajo dokazan diskoduralni konflikt, obstaja pri jasnih kontraindikacijah za op. zdravljenje možnost infiltracije nevroforamna ali tudi epiduralne/kavdalne blokade. Epiduralna/kavdalna blokada je ena izmed metod zdravljenja spinalne stenoze. Gre za simptomatsko zdravljenje in ne odpravi vzroka za nastale težave. Bolečino, ki je posledica kompresijskega zloma vretenca, bodisi zaradi osteoporoze, benignih ali malignih tumorjev ali redkeje travme, je možno zdraviti z vertebroplastiko/kifoplastiko. V poštev prihaja tudi pri zdravljenju kostne bolečine pri večjih hemangiomih in metastatski bolezni. Pri kifoplastiki se poslužujemo tudi zmožnosti delne/celotne povrnitve višine vretenca. Veliko je govora o perkutanih nukleotomijah oz. nukleoplastiki. Pri teh metodah pristopamo do medvretenčnega diska skozi punkcijsko mesto na koži. Postopki se razlikujejo po načinu terapevtskega delovanja v medvretenčni ploščici. Glede na način delovanja jih delimo na kemične (kemonukleoliza s chimopapainom, ozonom in alkoholom), mehanske (atroskopska discektomija) in termične (laserska, intradiskalna elektrotermalna anuloplastika, radiofrekvenčna). Dokazi o učinkovitosti nukleoplastike so šibki do zmerni. Obstaja konsenz, da je poseg nukleoplastike uspešen le pri zamejenih hernijah medvretenčnega diska, brez kompletne rupture čvrstega vezivnega obroča. Pri tem moramo upoštevati, da je višina medvretenčnega diska ohranjena še vsaj za polovico od svoje prvotne višine. Velikokrat pa je vzrok bolečine le boleče narastišče mišič – entezopatija, kar lahko rešimo s preprosto infiltracijo kortikosteroidne in anestetične mešanice.

Vpliv obsežnih hrbteničnih posegov na bolečino in delazmožnost

Avtor: doc. dr. **Gregor Rečnik**, dr. med., spec. ortoped. krg.,
Oddelek za ortopedijo, Univerzitetni klinični center Maribor, Slovenija

Ključne besede: spondilodeza, rehabilitacija, delovna obremenitev, zatrditev hrbtenice, spinalna fuzija

Izvleček: Zatrditev hrbtenice z inštrumentacijo (spondilodeza) je zahteven, drag in zamuden operativni poseg z nezanemarljivimi pooperativnimi biomehanskimi zapleti, kot je npr. progresivna deformacija na zgornjem robu posteriorne inštrumentacije. Obravnava je že v bolnišnici zaradi različne dolžine operativnih posegov, števila v zatrditev vključenih hrbteničnih segmentov in starosti posameznika individualna. V domačo oskrbo jih lahko odpustimo že drugi dan (npr. eno-nivojski minimalno invazivni poseg) ali šele sedmi dan (npr. 6-nivojska spondilodeza pri 82-letniku). Vsem odsvetujemo prepogibanje (npr. delo na vrtu), dvigovanje bremen (npr. nošnja drv) in rotacije v ledvenem predelu (npr. tenis), saj nekritično ponavljajoče se obremenitve lahko privedejo do degenerativnega obolenja sosednjega segmenta ali do utrujenosti vstavljenega materiala, ki lahko popusti (npr. zlom vijaka).

Agresivna rehabilitacija s polno delovno in športno aktivnostjo, ki je v veljavi pri obravnavi pacientov po operaciji hernije disci, je pri pacientih s spondilodezo kontraproduktivna. Zgodnji pričetek rehabilitacije nekaj tednov po spondilodezi namreč poslabša funkcionalni rezultat, poveča stroške zdravljenja in zmanjša celokupno učinkovitost obravnave napram kasnemu pričetku rehabilitacije po dveh oz. treh mesecih (1).

Po treh mesecih lahko pričnejo pacienti delati s polnim delovnim časom. Pri pacientih, ki tekom delovnega procesa dvigujejo bremena, ali ki opravljajo delo v ergonomsko neprimernem položaju trupa (npr. avtomehanik), sledi postopen prehod na staro delovno mesto preko nekajtedenskega skrajšanega delovnika ali polnega delovnika z začasnimi omejitvami. Izjemoma pri težjih fizičnih delih, kjer prilagoditev delovnega mesta ni mogoča (npr. kovač), svetujemo polno delovne reintegracijo šele po letu dni. Takrat so na kontrolnem rentgenskem posnetku že vidni znaki kostne premostitve med vretenci. Nezadostnost mišičnega steznika, neredko pogojena z operativnim posegom, se kaže z mehansko bolečino v križu, ki je lahko razlog za ponavljajoče se odsotnosti z dela in ponovne obiske pri zdravniku, zato je spodbujanje k vadbi za jačanje stabilizatorjev trupa ključno.

Stenoza ledvene hrbtenice: operacija in kdaj?

Avtor: asist. dr. **Lovro Suhodolčan,** dr. med, spec. ortoped. krg., Univerzitetni klinični center Ljubljana, Ortopedska klinika, Slovenija

Ključne besede: spinalna stenoza, nevrogena klavdikacija, radikulpatija, zdravljenje

Strokovno sodelovanje: zdravljenje in rehabilitacija ter prognoza delovne zmožnosti

Ozadje/vprašanje/problem: Stenoza ledvene hrbtenice pomeni zožitev spinalnega kanala in/ali foramnov, skozi katere izstopajo spinalni živci. Po 65. letu starosti je stenoza najpogostejši razlog za operativno zdravljenje ledvene hrbtenice. Nekoliko pogosteje se pojavlja pri moških (1,5 : 1) in najpogosteje prizadene nivo L4-5 (91 %). Povečan pojav opažamo pri povišanem ITM in pri prirojenem zoženju spinalnega kanala.

Poznamo več vrst spinalne stenoze, med katerimi je daleč najpogostejša stenoza zaradi različnih degenerativnih sprememb. Med najpogostejše vzroke utesnitve živčnih struktur sodijo hipertrofične spremembe fasetnih sklepov in rumenega ligamenta, redkeje izbočenje medvretenčnih ploščic. Kot posledica degenerativnih sprememb diska lahko pride do degenerativnega zdrsa vretenca ali do degenerativne skolioze ledvene hrbtenice. Obe stanji dodatno utesnjujeta spinalni kanal in intervertebralne foramne.

Patofiziološko gre pri spinalni stenozi za kronični pritisk in posledično ishemijo kavde ekvine in/ali spinalnih živcev. Težave so izrazitejše pri hoji, popustijo pa v mirovanju. Značilen simptom stenoze ledvene hrbtenice je nevrogena klavdikacija. Pri centralni stenozi je nevrogena klavdikacija mnogokrat edini simptom, medtem ko je pri stenozi lateralnega recesusa ali pri foraminalni stenozi lahko prisotna tudi radikularna simptomatika. V primeru klavdikacijskih bolečin je le-te potrebno ločiti od tistih, ki nastanejo ob periferni arterijski bolezni.

Metode/rezultati: Operativno zdravljenje je namenjeno bolnikom s težkimi simptomi in tistim, ki jim konzervativno zdravljenje ne pomaga. Kirurško zdravljenje stenoze ledvene hrbtenice zajema več različnih posegov. Primarno je potrebno utesnjene živčne strukture dekomprimirati, v kolikor so prisotni še elementi nestabilnosti ledvenih vretenc (listeza, skolioza, segmentna nestabilnost, popoškodbena deformacija), hrbtenico tudi fiksiramo in zatrdimo.

Zaključki/spoznanja: Dekompresija ledvene hrbtenice je uspešna operacija za zmanjšanje bolečine v nogi. Manj uspešno pa odpravi bolečino v križu (mehanska bolečina). 60 % bolnikom se stanje pomembno izboljša znotraj treh mesecev po operaciji, še 15 % v roku dveh let. Pri približno četrtini primerov, pa izboljšanja ne opažamo.

Sindrom neuspele kirurgije hrbtenice – kdaj je revizijska operacija dobra ideja?

Avtor: asist. dr. **Matevž Topolovec,** dr. med., spec. ortoped. krg., Ortopedska bolnišnica Valdoltra, Slovenija

Ključne besede: Sindrom neuspele kirurgije hrbtenice, nevropatska bolečina, revizijska operacija hrbtenice

Ozadje: Sindrom neuspele kirurgije hrbtenice predstavlja čedalje večji javno zdravstveni problem tako zaradi razširitve indikacij na področju hrbtenične kirurgije kot samim staranjem populacije. Sindrom predstavlja stanje neizboljšanja oz. poslabšanja bolečine v hrbtu in/ali nogi po operaciji na ledveni hrbtenici. Vzrokov za neuspeh hrbtenične operacije je več.

Metode: Napravljen je bil pregled literature in opredelitev do posameznih možnih vzrokov za neuspeh operacije na področju ledvene hrbtenice. Obravnavani so bili zadnji objavljeni pregledni članki iz tega področja ter študije, ki so obravnavale večje število primerov z daljšim časom sledenja. Prav tako so bili obravnavani tudi članki, ki proučujejo rezultate različnih načinov zdravljenja omenjene patologije. Poseben poudarek je bil podan na možnosti oz. uspehu ponovne, revizijske operacije na ledveni hrbtenici.

Rezultati: Čeprav je sama etiologija sindroma neuspele kirurgije multifaktorska, smo se natančneje opredelili do možnih predoperativnih, operativnih in post - operativnih vzrokov. Predstavili smo možne načine obravnave pacientov s tem sindromom. Obravnava naj bo multidisciplinarna. Natančno pa je potrebno preučiti tako možnosti ne - operativnega zdravljenja (modulacija analgezije, fizikalna terapija) ter operativnega zdravljenja (ponovna sprostitev nevroloških struktur, možnost neuspeha vstavljenih implantatov, ugotavljanje spremenjenih parametrov sagitalnega ravnovesja).

Zaključki: Pomen multidisciplinarnega pristopa pri obravnavi problema. Sodelovanje hrbteničnih kirurgov s psihologi, psihiatri, specialisti rehabilitacijske medicine ter specialisti za obravnavo in terapijo bolečine. Poudarek naj bo na pravilni izbiri pacienta in vztrajanju na ustrezni indikaciji za operacijo na področju ledvene hrbtenice.

Zaposlitvena rehabilitacija po poškodbi hrbtenjače in podporna zaposlitev

Avtor: asist. **Monika Klojčnik,** mag. psih., Univerza v Mariboru, Filozofska fakulteta, Slovenija

Soavtor: Matic Kovše, mag. soc. del., Slovenija

Ključne besede: zaposlitvena rehabilitacija, poškodba hrbtenjače, podporna zaposlitev

Ozadje: Gre za primer gospoda, starega 34 let, ki je po poklicu živilski tehnik in ima 1 mesec delovne dobe. Pri 16 letih je imel prometno nesrečo, kjer je utrpel poškodbo hrbtenice in posledično paraplegijo. Samostojno sedi v invalidskem vozičku, z njim je samostojno pokreten, zmožen je samostojnega presedanja. S strani ZRSZ je bil marca 2016 napoten na oceno delazmožnosti, znanj, delovnih navad in poklicnih interesov (ocena B). Po končani obravnavi je bilo podano mnenje, da je za uporabnika smiselna pridobitev statusa invalida in vključitev v programe zaposlitvene rehabilitacije. Junija 2016 mu je bil v skladu z ZZRIZ priznan status invalida in pravica do zaposlitvene rehabilitacije. Pridobil je naslednje omejitve: Zmožen za fizično lahko, sedeče delo, v ugodnih klimatskih pogojih, kjer je možen dostop z invalidskim vozičkom.

Metode: S februarjem 2017 se je vključil v program ZR, kjer se je najprej dva meseca usposabljal v delovnih kabinetih inštituta kot predpriprava na realno delovno okolje.

Po dvomesečnem usposabljanju znotraj kabinetov sta sledila 2 poskusa umeščanja v delovno okolje. S pomočjo strokovnega tima se je v septembru 2019 vključil v usposabljanje. Opravljal je administrativna dela, ki so zajemala pregled in pripravo dokumentacije in poročil, kontrolo pregledov opreme in vzdrževanja, zapisovanje poročil na CD-je, fotokopiranj, arhiviranje. Tekom usposabljanja je strokovni tim ugotavljal tudi prilagoditve delovnega mesta, ki bi bile potrebne, da lahko uporabnik delo opravlja nemoteno in učinkovito.

Prilagoditve, ki so bile potrebe, so:
- Dostop in delovno okolje prilagojeno uporabi invalidskega vozička.
- Raznolika dela, vendar v strukturiranemu delovniku.
- Delo v spontanem tempu.
- Možnost koriščenja dodatnih odmorov.
- Postopno seznanjanje z deli in nalogami.
- Pomoč sodelavcev pri prenosu dokumentacije iz pisarne v dislocirane glavne prostore.

Rezultati in zaključek: Kljub navedenim prilagoditvam je strokovni tim ugotavljal, da je delovna učinkovitost zaradi zdravstvenih težav znižana in je bila ocenjena na 75 %.
Ob zgoraj navedenih prilagoditvah in predvidenih tehničnih prilagoditvah, ki izboljšajo osnovne delovne pogoje, ga je delodajalec ob ustrezni subvenciji plače zaradi nizke učinkovitosti, z marcem 2018 zaposlil.

Bolečina v rami – operacija ali konzervativno zdravljenje

Avtor: Benjamin Marjanovič, dr. med., spec. ortoped. krg.
Ortopedska bolnišnica Valdoltra, Slovenija

Ključne besede: ramenska bolečina, multi faktorialni vzroki

Problem: Vzroki ramenske bolečine so multi faktorialni. Predstavljajo tretji najpogostejši vzrok za obisk zdravnika z incidenco med 0.9-2.5 %. Najpogostejši vzroki so: Težave povezane z rotatorno manšeto, z gleno-humeralnim sklepom, z akromio-klavearnim sklepom ter s prenesenimi bolečinami iz sosednjih regij. Ključna je diferencialna diagnoza med ramensko in vratno patologijo.

Vsako posamezno ramensko bolezensko stanje zahteva specifično diagnostično ter terapevtsko obravnavo. Terapijo delimo na konzevativno in operativno. Ključna je izbira pacienta. Ob pravilni izbiri pacienta imata obe vrsti terapije dobre dolgoročne rezultate. Med pomembnejše faktorje odločitve spada pacientovo pričakovanje rezultata. Ob ustrezni klinični in slikovni diagnostiki ter pacientovemu sodelovanju in razumevanju procesa zdravljenja, ima izbira vrste zdravljenja veliko bolj prediktivne rezultate. Težava nastane, če proces diagnostike in terapije ni ustrezno izveden. To pripelje do slabega končnega rezultata s perzistiranjem primarnega problema bolečine ter nefunkcionalnosti ramena, podaljšanje bolniškega staleža ter nezadovoljstva pacienta. V razvitem svetu se ocenjuje, da kljub zdravniški obravnavi, do 15 % pacientov navaja dolgoročno perzistiranje določene stopnje ramenske bolečine.

Zaključki: Kompleksna problematika ramenske bolečine zahteva natančno poznavanje vzrokov težav ter poznavanje možne konzervativne in operativne terapije. Natančna diagnoza, ustrezna terapija ter informiran in motiviran pacient, so ključni pogoji za dober končni rezultat in zadovoljnega pacienta.

Možnosti zdravljenja ramenske nestabilnosti

Avtor: Jakob Merkač, dr. med., spec. ortoped. krg, Ortopedska bolnišnica Valdoltra, Slovenija

Ključne besede: nestabilnost, konzervativno zdravljenje, operacija, stabilizacija, rehabilitacija

Rama je najbolj gibljiv sklep v človeškem telesu, kar omogoča izvajanje ogromno različnih gibov in dnevnih aktivnosti. Zaradi tega pa na drugi strani pogosto prihaja do poškodb, ki lahko privedejo do nestabilnosti. Zaradi poškodbe ali drugih vzrokov vezivno tkivo v okolici ramena popusti in omogoči, da glavica nadlahtnice zdrsne preko roba sklepne ponvice oziroma glenoida. Ob tem se lahko dodatno poškodujejo tudi druge strukture, ki tvorijo in obdajajo ramenski obroč (hrustanec, kapsula, labrum, kost ...). Simptomi ramenske nestabilnosti so lahko bolečina pri gibanju, občutljivost na dotik, preskoki, subluksacije in luksacije pri določenih ekstremnih gibih ali športni aktivnosti.

Z zdravljenjem je dobro začeti čim prej, da se pri ponavljajočih luksacijah dodatno ne poškodujejo tudi druge strukture. Obstaja več možnosti zdravljenja. V prvi fazi se lahko poskusi s konzervativnim zdravljenjem, kar zajema specifično individualno fizioterapijo in ustrezne vaje. V primeru neuspeha pa je potrebno operativno zdravljenje, ki je prilagojeno glede na pacienta in vrsto nestabilnosti ter tudi morebitno prisotnost pridruženih poškodb. Lahko se operira artroskopsko ali pa z odprto tehniko. Vrste operativnega zdravljenja so lahko skrčenje oz. zmanjšanje ramenske kapsule (zelo redko), stabilizacija po Bankartu (refiksacija poškodovanega vezivnega obročka oz. labruma), stabilizacija po Latarjetu (prenos korakoidnega odrastka zaradi defekta kostnine na glenoidu), tenodeza dela subskapularisa (ASA), remplissage (fiksacija kapsule v območje kostnega defekta na nadlahtnici), stabilizacija s prenosom dela kosti (iz območja medenice ali distalnega dela ključnice – avtografti), z nadomestitvijo kostnega defekta s pomočjo alografov (distalna golen), xenografov...

Po operaciji ima pacient roko nameščeno v opornici približno 6 tednov. Že v tem obdobju lahko izvaja določene vaje. Po 6. tednih prične z agresivnejšimi vajami in razgibavanjem. Po približno dveh mesecih opravi rehabilitacijo v zdravilišču. Po približno 4. mesecih lahko prične tudi z vadbo v fitnesu in večjimi obremenitvami. Po približno 6. mesecih je dovoljena vsa aktivnost.

Izid in invalidnost po operaciji ramenske proteze

Avtor: Tomaž Bajec, dr. med., spec. ortoped. krg., Univerzitetni klinični center Maribor, Oddelek za ortopedijo, Slovenija

Ključne besede: ramenska proteza, invalidnost

Ramenska proteza je poseg, ki ga planiramo, kadar ima pacient bolečino in moteno gibljivost v ramenskem sklepu. Vzroki so različni (bolezen, tumor, poškodba). Fizikalna terapija oz. druge vrste operacij na ramenskem sklepu ne privedejo do želenega rezultata.

Indikacija za vstavitev ramenske proteze so različne. Možne patologije so osteoartritis, revmatoidni artritis, vaskularne nekroze, nestabilnostna artropatija, popoškodbena artropatija, manšetna artropatija, primarni in pogosteje sekundarni tumorji v predelu GH sklepa.

Glavni cilj operacije ramenske proteze je zmanjšanje bolečine. Sledi funkcionalna izboljšava in izboljšanje celotnega stanja pri pacientu. Vstavitev ramenske proteze samo za pridobitev gibljivosti večinoma ni upravičena.

Kontraindikacija za vstavitev ramenske proteze je podobna kot pri ostalih protezah: aktivna infekcija v sklepu, okvara živcev, še posebej okvara Aksilarnega živca.

Za ocenjevanje rezultatov vstavitve ramenske proteze so na voljo različni formularji: NEER-ov pooperativni 'test', CONSTANCE&MURLEY, UCLA, SFA36 DASH, SST, WOOS, WORC, WOSI, RC-QOL, OSS in seveda drugi testi.

Verjetno je najobjektivnejše, da se za oceno uspešnosti posebej ocenjuje kategorije, kot so: bolečina, gibljivost, funkcija, zadovoljstvo bolnika in rentgenska stabilnost ramenske proteze.

Komplikacije po vstavitvi ramenske proteze niso redkost. Povprečni pacient ima 4 ali 5 potencialnih vzrokov za neuspeh operacije (npr. retroverza glavice nadlahtnice je lahko povezana z neuspehom operacije, še bolj pa vrsta obrabe glenoida, npr. B2 ali C tip).

V Sloveniji je invalidnosti določena z zakonom: (ZPIZ-2) v 63. členu (definicija invalidnosti) razloži, da je:
(1) Invalidnost po tem zakonu je podana, če se zaradi sprememb v zdravstvenem stanju, ki jih ni mogoče odpraviti z zdravljenjem ali ukrepi medicinske rehabilitacije in so ugotovljene v skladu s tem zakonom, zavarovancu zmanjša zmožnost za zagotovitev oziroma ohranitev delovnega mesta oziroma za poklicno napredovanje.

Dejstvo je, da po takšni operaciji ostane določena invalidnost, upoštevajoč zgoraj navedeno definicijo invalidnosti.

Praktični primeri prilagoditev delovnih mest pri okvarah ramena v okviru zaposlitvene rehabilitacije

Avtor: Miran Krašovec, dipl. ing. teh. prometa, Invalidsko podjetje Pošte Slovenije d. o. o., Maribor, Slovenija

Ključne besede: prilagoditev, delovna mesta, pripomočki

Strokovno sodelovanje: ZPIZ in Sklad za zaposlovanje invalidov

Ozadje/vprašanje/problem: Ohranitev dela zaposlenim invalidom na istem delovnem mestu s prilagojenimi pripomočki za delo.

Povzetek: Invalidsko podjetje Pošte Slovenije, proizvodnja in storitve, d. o. o., je hčerinska družba Pošte Slovenije, ustanovljena, 16. 4. 2015 z namenom ohranjanja zaposlitev in s tem socialne varnosti delavcev.
Naša prizadevanja so usmerjena v prilagoditev prostorov in delovnih sredstev z namenom ohranitve zaposlitve delovnih invalidov z ustreznimi tehničnimi pripomočki.

Poklicna rehabilitacija je iskanje rešitve za ohranitev zaposlitve ali zagotovitev delovnega mesta delavcu glede na njegovo preostalo delovno zmožnost. Poudarek je predvsem na prilagojenih delovnih sredstvih in pripomočkih, s katerimi bi olajšali delo invalidom in jim omogočili, da še nadalje delajo glede na njihovo preostalo delovno zmožnost v izogib poslabšanja zdravstvenega stanja in invalidnosti.

Splošni problem, ki ga vidimo je, da so delodajalci, kakor tudi zavarovanci in ostale institucije premalo seznanjeni s tem, kaj sploh je poklicna rehabilitacija in kakšne možnosti imajo.

S samo prilagoditvijo delovnih mest in z nakupom različnih delovnih sredstev in pripomočkov, omogočimo delavcu boljše pogoje dela, kar pa pozitivno vpliva na uspešno opravljanje dela, zmanjšuje bolniško odsotnost in povečuje zadovoljstvo zaposlenega. Pri prilagoditvi delovnih mest in pri nabavi ustreznih tehničnih pripomočkov sodelujemo s strokovnjaki ZPIZ-a, kakor tudi s pooblaščenimi koncesionarji poklicne rehabilitacije. S skupnimi močmi iščemo rešitve in se trudimo priti do enotnega mnenja, ki je osnova, da delavec lahko ostane na istem delovnem mestu, ki mu ga prilagodimo, glede na njegove omejitve in preostale delovne zmožnosti.

Pripravili smo predstavitev v kateri je razvidno, da nam je v nekaj primerih uspelo skupaj s delavci, z ZPIZ-om in REHA centrom CRI Celje, pridobiti sredstva za prilagoditev delovnih mest z delovnimi pripomočki.

V IPPS se trudimo, da bi imeli enak pristop in enake obravnave na vseh ZPIZ-ovih enotah, kot tudi pri ostalih institucijah v državi, predvsem iz razloga, ker so naši zaposleni razpršeni po ozemlju celotne Republiki Slovenije.

Rezultati: Ohranitev delovnega mesta zaposlenim invalidom in zadovoljstvo zaposlenih.

Zaključek/spoznanja: Zaposleni invalidi so še vedno vključeni na trgu dela, kar ima veliki vpliv na njihovo osebnostno rast, zadovoljstvo in podobno.

Izzivi v zdravljenju patelofemoralne nestabilnosti in bolečine pod pogačico

Avtor: dr. **Bogdan Ambrožič,** dr. med., spec. ortoped. krg., Bisturmed, Ortopedska ambulanta d.o.o

Ključne besede: nestabilnost pogačice, koleno, bolečina pod pogačico

Ponavljajoči se izpahi pogačice in bolečina pod pogačico sta pogosti patologiji pri mladi in športno aktivni populaciji. Težave, ki jih bolniki imajo, onemogočajo izvajanje želenih dnevnih in športnih aktivnosti. Za uspešno zdravljenje je potrebno celovito poznavanje anatomije in biomehanike sklepa med stegnenico in pogačico (patelofemoralni sklep). Na podlagi anamneze, kliničnega pregleda in radiološke diagnostike (rentgensko slikanje, preiskava z magnetno resonanco, merjenje torzijskega profila spodnjih okončin) postavimo diagnozo in načrtujemo primeren, najbolj ustrezen način zdravljena.

Izpah pogačice je pri športni aktivnosti lahko posledica udarca v pogačico ali zvina kolena. Ob izpahu se poškoduje medialni patelofemoralni ligament (MPFL), ki je najpomembnejši stabilizator pogačice. Pogosto se izpahi pogačice ponavljajo, kar je povezano z anatomskimi nepravilnostmi patelofemoralnega sklepa, kot so: višje položena pogačica, displazija žleba stegnenice, povečan stranski nagib pogačice, povečana razdalja med žlebom stegnenice in grčo golenice (TT-TG razdalja), povečan valgus kolena in povečana anteverzija stegnenice. Za operativni poseg se odločimo po neuspešnem konzervativnem zdravljenju (s fizikalno terapijo in opornicami). V literaturi je opisanih več kot sto različnih operativnih posegov, s katerimi se opravi stabilizacija pogačice. Po številnih raziskavah je sedaj najbolj uspešna stabilizacija pogačice z rekonstrukcijo MPFL. V primeru višje stopnje displazije so poleg rekonstrukcije MPFL potrebni tudi dodatni posegi, kot so transpozicija grče golenice (tuberozitas tibije) in/ali trohleoplastika. V primeru ugotovljenih pomembnih torzijskih in kotnih (angularnih) nepravilnosti pa so potrebne korektivne osteotomije stegnenice in/ali tibije.

Bolečina pod pogačico je lahko posledica preobremenitve patelofemoralnega sklepa. Vzroki so pretirana športna aktivnost, nepravilna tehnika izvajanja le-te in v mišičnem neravnovesju. Pogosto ugotavljamo tudi anatomske nepravilnosti patelofemoralnega sklepa, kot v primeru nestabilnosti pogačice. V teh primerih pride zaradi nepravilne lege pogačice v žlebu do neenakomerne obremenitve hrustanca sklepa in pojava bolečine. Zdravljenje vključuje običajno fizikalno terapijo, zmanjšanje obremenitev, v redkih primerih pa moramo z operativno terapijo vzpostaviti normalne parametre patelofemoralnega sklepa.

Ali so ohranitveni posegi pri obrabi kolena smiselni in kdaj?

Avtor: Matevž Kuhta, dr. med., spec. ortoped. krg., Univerzitetni klinični center Maribor, Oddelek za ortopedijo, Slovenija

Ključne besede: artroskopija, nanofrakture, subhondroplastika, vrsta poke meniskusa, rekonstrukcija vezi

V sklopu obrabe ali poškodbe kolena so lahko prizadeta različna tkiva: hrustanec, subhondralna kost, kolenske vezi in meniskusi.

Hrustanec je tkivo z izjemno omejenimi sposobnostmi celjenja po poškodbi. Zdravljenje hrustančnih poškodb je odvisno od debeline in površine poškodovanega hrustanca. Na voljo imamo različne operacije: debridement z lavažo sklepa, mikrofrakture/nanofrakture, abrazijsko artroplastiko, presadke autolognih osteohondralnih čepov (mozaikplastika) in implantacijo autolognih hondrocitov. V zadnjih letih so v porastu operacije z implantacijo posebnih biomaterialov, ki omogočajo "in situ" regeneracijo tako hrustančnega tkiva kot subhondralne kostnine.

Po mikrofrakturah/nanofrakturah je potrebna razbremenitev z berglami 6-8 tednov, polna obremenitev pri športu pa ne prej kot po dveh do treh mesecih. Po implantaciji umetnih membran je dovoljena polna obremenitev pri hoji po dveh mesecih, športne aktivnosti pa več mesecev po posegu. Natančen protokol rehabilitacije je odvisen od mesta poškodbe in vrste posega.

V primerih, ko gre predvsem za prizadetost subhondralne kostnine, kar s skupnim imenom poimenujemo edem kostnega mozga oz. lezija kostnega mozga (bone marrow lesion, BML) lahko le to zdravimo s posegom, imenovanim subhondroplastika. Po subhondroplastiki se priporoča razbremenitev 2-4 tedne, čemur sledi intenzivna rehabilitacija.

Zdravljenje ligamentarnih poškodb zavisi od bolnikovih težav in od splošnega stanja sklepa. Kadar bolniki poročajo o nestabilnosti kolenskega sklepa, ki ni prekomerno "obrabljen", bolniku ponudimo možnost rekonstrukcije kolenskih vezi. Presadek dozoreva v procesu ligamentizacije vsaj 9 mesecev, zato je polna obremenitev po posegu dovoljena šele po tem obdobju.

Zaradi pomembne vloge meniskusov pri stabilizaciji, kinematiki, predvsem pa absorbiranju aksialnih obremenitev kolenskega sklepa, se v zadnjih letih veliko pozornosti posveča njihovi rekonstrukciji. Ali je meniskus primeren za rekonstrukcijo, je odvisno predvsem od vrste in mesta poke, stanja tkiva meniskusa in pričakovanj bolnika. Rekonstrukciji sledi skrbno zastavljen načrt terapije z omejitvami obremenitve in gibljivosti, predvsem krčenja. Polna obremenitev kolena v kombinaciji s polno gibljivostjo in priporočljiva pred iztekom šestih mesecev po posegu.

Rezultati po zahtevnih kolenskih posegih in revizijskih operacijah

Avtor: izr. prof. dr. **Blaž Mavčič,** dr. med., Univerzitetni klinični center Ljubljana, Ortopedska klinika, Slovenija

Soavtorja: asist. dr. **David Martinčič,** dr. med., Univerzitetni klinični center Ljubljana, Ortopedska klinika, Slovenija,
prim. **Marko Špiler,** dr. med., Univerzitetni klinični center Ljubljana, Ortopedska klinika, Slovenija

Ključne besede: kolenska artroplastika, revizijska operacija, kostni tumor

Strokovno sodelovanje: Ortopedska klinika

Ozadje: Zdravstvena stanja, kot so recimo kostni tumorji, hude poškodbe, okužbe, zgodnja degeneracija hrustanca, aseptična nekroza in avtoimunske bolezni, lahko privedejo do potrebe po kompleksni rekonstrukciji kolena ali revizijski artroplastiki kolena pri mlajših osebah oz. osebah srednjih let, ko so še vedno delovno aktivne. Cilj tega prispevka je predstaviti mehanične dejavnike in delovne obremenitve, zaradi katerih pride do zgodnjega omajanja endoproteze, načela operativnega zdravljenja, rehabilitacijo, trajanje zdravljenja, realistična pričakovanja glede končnega kliničnega izida in delazmožnosti.

Metode: Prikaz biomehanskih razlag in teoretičnih smernic bo dopolnjen s predstavitvijo določenih kliničnih primerov, pri katerih je bilo zdravljenje še posebej težavno in pogostokrat neuspešno. Poudarek bo na indikacijah/kontraindikacijah za operativno zdravljenje, pričakovanem trajanju rehabilitacije, funkcionalnih izpadih ob zaključku zdravljenja in pričakovani delazmožnosti pri takšnih pacientih po koncu zdravljenja.

Rezultati: Zdravstveni in biomehanski dejavniki, ki vplivajo na končni rezultat zahtevne kolenske artroplastike, vključujejo starost pacienta, lokalizacijo in velikost kostnega defekta, kakovost mehkih tkiv ob kolenu in preostalo mišično moč. Motivacija pacientov za vrnitev na prejšnje delovno mesto je zelo odvisna od psiholoških in socialnih dejavnikov, kot npr. finančne motivacije, zaposlitvenega statusa, prilagodljivosti delodajalca in delovnih pogojev njihovi invalidnosti, kot tudi vpliva delovnih obremenitev na nadaljnje slabšanje njihove invalidnosti.

Zaključki: Funkcionalni izid zahtevne kolenske rekonstrukcije oz. kolenske revizijske operacije je odvisen od zdravstvenih, biomehanskih in socialnih dejavnikov. Objektivna ocenjevalna merila vključujejo mišično moč kvadricepsa, aktivni/pasivni obseg gibljivosti, okorelost, bolečine in subjektivno oceno pacienta (npr. KOOS, WOMAC). Zdravljenje težjih kliničnih primerov se lahko pogosto zaključi šele po enem letu rehabilitacije ali celo dlje. Dolgoročno se pri vseh pacientih po artroplastiki kolena postopoma poslabša funkcionalno stanje, bolečina in tveganje za omajanje endoproteze.

Primer prilagoditve delovnega mesta pri osebi s prizadetostjo kolka in ledveno križne hrbtenice

Avtor: Brstin Kavalar, univ. dipl. pedagog, CRI Celje, d.o.o., Slovenija

Ključne besede: poklicna rehabilitacija, delazmožnost, prilagoditev delovnega mesta

Poklicna rehabilitacija s prilagoditvijo delovnega mesta osebe z zmanjšano delovno zmožnostjo je najprimernejša oblika poklicne rehabilitacije, saj je najhitreje izvedljiva in omogoča najhitrejši način vrnitve osebe v delovni proces. V predstavljenem primeru poklicne rehabilitacije je prikazana prilagoditev obstoječega delovnega mesta »operativni vodja del za strojne instalacije« za osebo, pri kateri so podane trajne omejitve delovne zmožnosti – zmožen za delo, ki se opravlja izmenoma stoje in sede, s hojo samo na kratke razdalje, z rokovanjem z bremeni do 5 kg, brez vzpenjanja ali dela na lestvi, v ledveno križni hrbtenici se lahko giba le v okviru ergonomskih kotov. Le z občasnim pripogibanjem in le občasno v prisilni drži ledveno križne hrbtenice. Vzrok navedenih omejitev je bila funkcionalna prizadetost ledveno križne hrbtenice in levega kolka. Navedene omejitve delovne zmožnosti smo uspešno nadomestili s prilagoditvijo delovnega mesta s »premično dvižno ploščadjo«, kar omogoča osebi še nadalje opravljanje istega dela in hitro vrnitev v delovno okolje takoj po zaključeni medicinski rehabilitaciji.

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THERMANA

11.-12. MARCH 2021, LAŠKO, SLOVENIJA

6th International Congress of Medical Assesors

11.-12. MARCH 2021, LAŠKO, SLOVENIJA

6th International Congress of Medical Assesors

BOOK OF ABSTRACTS

11. - 12. MARCH 2021

The themes of the Congress:

- Orthopaedics
- Fibromyalgia
- Occupational and employment rehabilitation

Zavod za zdravstveno zavarovanje Slovenije

ZIZRS
Združenje izvajalcev zaposlitvene rehabilitacije v Republiki Sloveniji

THERMANA

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Foreword

Before you is the book of abstracts for the 6th International Congress of Medical Assessors of the Republic of Slovenia, an event that took place between 11 and 12 March 2021 in Laško and has become a traditional meeting for professionals in insurance and expert medicine, as well as for everyone else in Slovenia involved in this field of activity. We are proud of that.

This central event in deciding on justified absence from work, disability and its assessment, as well as return to work, is organised every two years by the Health Insurance Institute of Slovenia, the Pension and Disability Insurance Institute of Slovenia, the Association of Providers of Employment Rehabilitation in Slovenia, and Thermana Laško. To ensure safety for participants during the COVID-19 epidemic, this year's congress took place online.
The focus of the congress were topics concerning orthopaedics and fibromyalgia, as well as vocational and employment rehabilitation. Treatment novelties and advances in the rehabilitation of patients were presented and how these have an impact on the early and successful return to work. The Association of Providers of Employment Rehabilitation gives an insight into the possibility of reintegrating disabled persons in the working process and thus also ensuring their social security. More than 50 speakers, including from abroad, actively participated in the congress. Due to the online implementation of the event, there were no posters this time.

The congress is primarily meant for physicians working in insurance and expert medicine, mainly in managing absence from work due to illnesses or injuries, in assessing the work ability and disability of patients and monitoring the progress of their treatment. It is especially interesting for family medicine specialists/general practitioners, court-appointed experts, occupational, transport and sports medicine specialists, and vocational rehabilitation specialists, as well as for professionals working in social security, vocational and employment rehabilitation, and return to work.

Expert and insurance medicine is a new interdisciplinary medical profession that was formed at the Health Insurance Institute of Slovenia and the Pension and Disability Insurance Institute of Slovenia, and is paving its way for implementation. The expert medicine and insurance medicine section of the Slovenian Medical Association has already carried out the first systematic training in this field, recognised as special know-how of the Slovenian Medical Association. An important step in the formation of the trade has therefore been made, while questions of its formal inclusion into the health system remain, such as, for example, its regulation through law. Such changes will aid in the quicker development and increased attractiveness for physicians for this important field of work. The congress of medical assessors allows for the networking of experts in this field, the continuity and development of the simplified decision-making doctrine for the various fields of medicine. It also increases recognition and implementation of this field at home and abroad.

Read the book of abstracts and see the diversity and practical usability of this new medical branch for yourself.

Jana Mrak, MD, MSc, Chair of the Scientific Committee

Insurance System and Disability Assessment in the Netherlands

Author: Annette E. de Wind, MD, Secretary General of EUMASS
(European Union of Medicine in Assurance and Social Security), the Netherlands

Keywords: dutch social security disability assessment

In the Netherlands insurance medicine is a broad specialism within social medicine, which focuses on work and health in relation to social insurance legislation.

First the Dutch social security system and legislation will briefly be outlined with a focus on the disability schemes.

Subsequently, absenteeism, interventions and return-to-work will be discussed. With the focus on what claimants still can do despite their functional limitations, a timely and adequate absenteeism and reintegration approach must be provided, so that functioning of the employee in work is restored as quickly and completely as possible and long-term disability is prevented.

In those cases where this is not possible, the reintegration efforts are assessed, followed by a disability assessment.

This insurance medical assessment, in which the insurance physician assesses remaining functional capabilities of the claimant, will be discussed into detail.

Insurance System and Disability Assessment in Belgium

Author: Dr. **Jean-Pierre baron Schenkelaars,** MD, President of EUMASS (European Union of Medicine in Assurance and Social Security), Belgium

Keywords: disability insurance (in Belgium), sickness funds, (Belgian) social security, medical advisers, disability assessment (in Belgium)

Belgium is a federal state with an area of 30 510 km2 and 11.46 million inhabitants with a density of 323 inhabitants/km2. 3 languages: Dutch, French and German and a GDP of 373 billion €.

The Bismarckian social security is solidarity based, financed up to 62 % by contributions from workers and employers. It covers 6 main sectors: Health and disability insurance, occupational diseases, workplace accidents, unemployment insurance, pensions, and family allowances.

The Belgian Health care and disability compulsory insurance covers 99 % of the population. It is based on a co-decision and consensus model involving sickness funds, health care providers, employers, and government. There is a free choice and access to providers. GP's and specialists are independent.

Disability pensions and disability assessment are organised by the Law on Health and Disability Insurance (1994). The National Institute of Health and Disability Insurance (NIHDI) is in charge for implementation of the disability insurance in collaboration with seven different mutual health funds (mutuelles). The affiliation to one of the 7 heath funds is compulsory for every person living in Belgium. But there is a freedom of choice.

The medical advisers of the health funds are responsible for monitoring incapacity for work and for reintegration in collaboration with multidisciplinary teams (nurses, physiotherapists, psychologists, occupational therapists, etc.) under their supervision. The decisions of the medical advisers are binding on the insurers.

Considering that incapacity for work is not only medical but it is multifactorial, disability assessment in Belgium is undergoing a paradigm shift since the year 2007, moving from an insurance logic (Bismarck) to a therapeutic logic: do not first check if people has lost enough to be eligible for compensation but focus first on the remaining capacities to reintegrate and, if necessary, then compensate.

Update on Fibromyalgia Syndrome

Author: Prof. **Piercarlo Sarzi-Puttini,** MD, PhD, Rheumatology Unit, ASST-Fatebenefratelli L. Sacco University Hospital, Milan, Italy

Fibromyalgia, or fibromyalgia syndrome, is a condition characterized by chronic widespread pain and other symptoms such as fatigue, sleep disturbances, autonomic abnormalities and neurocognitive difficulties. Moreover, patients are usually affected by regional pain syndromes, such as irritable bowel syndrome or migraine, and mood disorders, such as anxiety and depression. Thus, fibromyalgia appears as a complex, polysymptomatic syndrome that cannot be pigeon-holed in a predetermined specialty, but it encompasses many of them - mainly algology, neurology, rheumatology, psychiatry and rehabilitation medicine. Hence, the question of who should manage and follow-up these patients arises, in particular because symptoms may vary within the same patient during the course of the disease, and because fibromyalgia can be severely invalidating. Therefore, a multidisciplinary approach is necessary, in which specialized and nonspecialized physicians strictly interact with other healthcare professionals.

Even if physicians started to recognize fibromyalgia as a clinical entity decades ago, it endures to be a controversial disease, even regarding its nosological classification. Diagnostic complexity is increased by its complex polysymptomatology, which can continuously evolve during the course of the disease in each single patient. Therefore, diagnostic and classification criteria are continuously evolving. The American College of Rheumatology (ACR) was the first one to put some order in fibromyalgia diagnosis. In the 90s, fibromyalgia was just officially recognized as a discrete clinical entity; the 1990 ACR classification criteria only considered chronic widespread pain (defined as pain on the left and right sides of the body, above and below the waist, and axial skeletal (cervical or thoracic spine, anterior chest or low back) pain), and tenderness (defined as pain upon the palpation of ≥11 out of 18 tender point sites) for the diagnosis of fibromyalgia. After twenty years, the ACR implemented the criteria with an exhaustive list of symptoms that could be present in fibromyalgia patients (especially with the symptom severity scale). Although comprehensive, these criteria were not very feasible in daily clinical practice. They started to be simplified in 2011, shortening the list of associated symptoms, and afterwards in 2016, emphasizing more the concept of "generalized pain". The latest AAPT diagnostic criteria tried to create a really feasible tool for physicians in order to facilitate fibromyalgia diagnosis. They divided the criteria in different dimensions. Dimension includes core diagnostic criteria, which are three: (1) multisite pain defined as 6 or more pain sites from a total of 9 possible sites; (2) Moderate to severe sleep problems OR fatigue; (3) Multisite pain plus fatigue or sleep problems must have been present for at least 3 months. Other dimensions can reinforce diagnostic conviction: common features, epidemiology, psychiatric comorbidities, functional consequences and risk factors can all be taken into account by the physicians and have all to be thoroughly investigated during the history taking.

Importantly, AAPT criteria emphasised the concept that the presence of other disorders does not exclude the existence of fibromyalgia as a comorbidity; in fact, many rheumatic diseases have a high prevalence in fibromyalgia population – the opposite also being true. However, there may be a significant reluctance to diagnose fibromyalgia by some physicians, because of a number of reasons: uncertainty about diagnosis, especially because of the lack of specific biomarkers or pathognomonic signs, hesitancy in "labelling" a patient with a "stigmatizing" syndrome, and so on. In contrast, in some cases other conditions can mimic fibromyalgia, mainly: rheumatic diseases of recent onset (polymyalgia rheumatica, rheumatoid arthritis, etc.), endocrine diseases (hypothyroidism, vitamin D deficiency), gastrointestinal diseases (celiac disease), infectious diseases (Lyme disease, hepatitis C) and the early stages of a malignancy such as metastatic cancer, leukemia and lymphoma. Specific laboratory tests and a thorough history taking should always be performed.

Fibromyalgia pathogenesis is not fully understood; it has been hypothesized that fibromyalgia pain may arise from a combination of genetic predisposition, stressful life events, peripheral (inflammatory) and central (cognitive-emotional) mechanisms, which interplay to create pain dysperception owing to neuromorphological modifications. This particular type of stimulus dysperception is framed in the new term "nociplastic pain", which is a clinical definition of pain arising from altered nociception, despite no evidence of tissue damage causing the activation of nociceptors or evidence of disease or lesions of the somatosensory system causing the pain. It appears clear that fibromyalgia management should take into account this multifactoriality, hence, it has to be multimodal, and

essentially based on three pillars: (1) patient education and fitness; (2) pharmacological therapy; (3) psychotherapy. Patient education and initiation of a structured exercise plan are the most important pillars of fibromyalgia treatment and could be given to each patient by the general practitioner. On the other hand, the initiation of a specific pharmacological therapy could be more difficult for a nonexperienced physician. The therapy of more severe cases, which were estimated to be one-third of total fibromyalgia population, could be set by the specialist, who is usually a rheumatologist or an algologist. The follow-up of the patient can afterwards be carried out by an integrated network including not only specialized and nonspecialized physicians, but also other healthcare workers, such as the rehabilitation and occupational therapist, the psychologist and the physiotherapist. The creation of such an organized healthcare workers' network, comprising a systematic and codified diagnostic-therapeutic pathway, would be essential to guarantee the appropriate, tailored therapeutic approach to the patient.

Fibromyalgia Syndrome: Etiopathology, Symptoms and Diagnostics

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Keywords: fibromyalgia, extended pain, etiopathogenesis, diagnosis

Problem: Do we know the fibromyalgia syndrome well enough?

Etiopathogenesis: A clear etiological factor which would trigger the fibromyalgia syndrome is not known. However, the risk factors which increase the probability of its development are known. The genetic factors include gene polymorphisms which are included in the metabolism of neurotransmitters. Some of the external factors which increase the probability for the development of fibromyalgia are certain psychological conditions (somatisation, mental stress, generalised anxiety, panic disorder), infections, hormonal disruptions, excessive physical strain.
There is no inflammatory process in the scope of the fibromyalgia syndrome. The main reason for the development of pain is hyperalgesia and allodynia, which are probably the result of the central sensitization and the subsequent inappropriate perception of the painful and non-painful stimuli.

Symptoms: The core fibromyalgia symptoms are extended pain, fatigue and sleep disorders, which last at least three months and cannot be explained with any other condition. They are usually accompanied by cognitive disorders, depression, headaches, paresthesia and other symptoms.

Diagnostics: We consider the fibromyalgia syndrome in patients who have been reporting extended pain for at least three months and clinical examinations and check-ups have not determined any other condition that would explain the patient's problems.
We use the diagnostics criteria of the American College of Rheumatology (ACR) as revised in 2016 for diagnosing purposes, with which we determine the severity of fibromyalgia (FS) based on the FS scale. It is a questionnaire consisting of two parts: the WPI (Widespread Pain Index: 0-19) and the SSS (Symptom Severity Scale: 0-12).

Findings: The success of treating patients with fibromyalgia is generally poor. In addition, the fibromyalgia syndrome is still not accepted in society as a seriously restrictive condition. Good treatment results are achieved only if the patient is precisely informed about the nature of the disease and the patient must also assume an active role in treatment. A multidisciplinary approach is very important, as well as the regulation of working conditions.

Diagnostic Challenges in the Diagnosis of Fibromyalgia

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Keywords: fibromyalgia, diagnosis, treatment

Abstract: Fibromyalgia is a chronic, firmly established and real condition. New guidelines for appropriate diagnosis and management are continuously being developed. Establishing the diagnosis of fibromyalgia is very difficult as no specific clinical or biomarker exists. Fibromyalgia is regarded as a diagnosis of exclusion so other chronic conditions must first be ruled out. Correct diagnosis often depends on the clinical experience of the treating physician. Consequently, the disease can be under-, over- or misdiagnosed. Careful history taking and examination is mandatory to rule out other conditions that are present in chronic widespread pain so that the correct therapy can be implemented.

A Stepwise Approach to the Treatment of Patients with Fibromyalgia

Author: Head Physician **Mojca Kos Golja,** MD, Head of the Expert Council of the Fibromyalgia Association, Slovenia

Keywords: fibromyalgia syndrome, therapeutic steps, non-pharmacological treatment, pharmacological treatment

Fibromyalgia treatment is a major challenge for family doctors and patients. The efficiency of the treatment very much depends on an early diagnosis. Therapeutic options are discussed with the patient. In 2017, the European League Against Rheumatism established that the therapeutic guidelines are no longer relevant. They therefore issued new guidelines which still apply today. A multidisciplinary group was established for this purpose, which includes members from twelve European countries and eighteen professionals of various clinical specialties, occupational medicine, epidemiology, healthcare and patients. They reviewed and classified almost three thousand expert articles and meta-analyses which they used in the preparation of evidence-based therapeutic guidelines. They chose pain relief, fatigue reduction, improvement of the patient's sleep and functionality as the key results of treatment. They assessed non-pharmacological measures and pharmacological treatment. Some findings have shown that treatment may be efficient without drugs, while both forms are often intertwined and combined. Non-pharmacological treatment forms are the first stage. The patient needs to be familiarised with the nature of their disease and motivated for active participation. The reviewed literature has shown that regular and gradually intensified exercise which reduces pain and improves the patient's functionality (aerobic activities, strength exercises, stretching exercises) is the most efficient. Relaxing techniques (yoga, pilates, tai chi, qigong) which reduce fatigue and improve sleep have been rated as moderately efficient in the study. Similar is true for acupuncture, cognitive-behavioural therapy, hydrotherapy. They also reviewed pharmacological treatment, which is symptomatic, non-specific, is not efficient in all patients, and has frequent adverse effects. Psychiatric treatment and psycho-pharmaceutical drugs are required in patients with depression, anxiety and catastrophic syndrome. In terms of painkillers, Tramadol is useful while anti-rheumatic drugs are inefficient. Tricyclic antidepressants, SSRI, SNRI, anticonvulsants, dopamine agonists and muscle relaxants have proven to be acceptable and moderately useful in pain and sleep disorders. Multimodal rehabilitation programs are indicated in severe inabilities and longer sick leaves, which in Slovenia are carried out by the University Rehabilitation Institute Soča. The expert group has concluded that further research is required, as well as more individualised approaches and specific forms of treatment.

Fibromyalgia – Case Report

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Keywords: fibromyalgia, temporary inability to work, workplace, return to work

The triggers of fibromyalgia symptoms may be various physical and mental stressors. Research shows that anyone may suffer from the disease. It is more frequent in women than in men and the disease affects the working population. The various factors for the development of the disease and long-term and frequent inability to work are mostly due to the workplace and working conditions rather than the symptoms of the disease and the character of the patient. Fibromyalgia symptoms may accompany and lead to other pathologies. There is no specific test to identify the disease, nor is there any specific treatment. Treatments of the symptoms are pharmacological and non-pharmacological: antidepressants and pain medications, psychotherapy and lifestyle change (frequent exercises – walking, cycling, swimming and relaxation methods). Fibromyalgia patients often visit their GP, they are often referred to various specialists at the secondary level for diagnostics, which is why an early, individual and multi-disciplinary approach is necessary, and the patient's cooperation is compulsory.

V.M., a 54 year old social care worker with a history of short-term employments and employer changes, has been unable to work for the fourth year in a row. J.V., a 57 year old elementary worker in manufacturing who, following a multi-disciplinary treatment and with the help of co-workers, learned how to manage pain long-term and remain employed at her workplace.

A recurring and long-term inability to work affects the patient, the employer, it burdens the healthcare system and leads to major financial burdens. Patients must have the option of a timely and appropriate treatment on the primary level in order to reserve the secondary and tertiary levels for the most complex cases. The aim of the treatment is for patients to learn to live with their symptoms, to manage them and to return to their working environment at least part-time. Understanding the working environment and maintaining contact with the employer, the employees and co-workers already during the temporary inability to work, prior to and even after assuming work are all key for the successful treatment of the disease and return to work. Interviews must be conducted in order to plan the details of return to work and the possible workplace adjustments.

Artificial Intelligence in Healthcare

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Keywords: artificial intelligence, machine learning, data mining, computer supported diagnostics

Intelligence is the ability to adjust to the environment and solve (difficult) problems. Artificial intelligence develops machine learning algorithms to solve difficult problems. It uses the data to create a model that can be used for solving new problems. For example, data obtained from patient diagnoses may be used to diagnose new patients. Machine learning models may be decision trees and rules, probability models, models that are based on similarities, and the increasingly popular artificial (deep) neural networks, which are achieving top results. Machine learning may be used in all areas that contain data. Learned models are used to solve difficult problems, such as, for example, predicting the probability of a loan repayment, detecting bad products on conveyor belts, recognising human speech, face and even emotional states, playing chess and other games, summarising texts, placing commas in a text, identifying bank frauds, identifying the products/films/books that may be relevant for a particular person, resolving legal disputes, controlling a self-driving car, etc.

Usage in healthcare includes many areas, such as diagnostics and disease prognostics, the analysis of medical images, detecting early signs of a disease, choosing the most appropriate treatment, determining the quickest path for ambulances, allocating patients with certain symptoms to a suitable specialist, providing intelligent robots to help during surgery, providing help in the development of new medicines by determining the functions of genes, searching for new biochemical connections in the human body, detecting biochemical characteristics of complex molecules, determining the characteristics of patients for clinical trials. In addition to solving medical and clinical problems, artificial intelligence is also used for other healthcare related tasks, such as planning and optimising schedules, financial and insurance protocols, searching for relevant data and arranging medical databases, etc.

However, it must be perfectly clear that this is just a machine without any awareness which, despite showing a very intelligent and qualitative approach to solving problems, has just a limited (non-lifelike) view of the world. Life is unpredictable and too complex to describe it in algorithms alone, which is why Man remains the decisive factor in decision-making processes.

Treatment of Fibromyalgia Patients at the Family Doctor

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Keywords: fibromyalgia, family medicine, occurrence, treatment, sick leave

Background: A family medicine specialist often deals with fibromyalgia cases. Its assessed prevalence among the general population is between 1.1 and 6.4 %. Women are at the forefront. They mostly complain about morning stiffness, fatigue and insomnia, which has a major impact on the quality of life and their work ability. The central symptoms, which last at least three months and include widespread pain (left and right side of the body, the area above and below the waist, axial bones), as well as fatigue, sleep disorders, myalgia, rigidity of joints, mood disorders and cognitive symptoms (e.g. forgetfulness, concentration issues), lead to long-term absence from work. This mostly ends with the disability assessment.

Methods: A review of the following diagnoses: M79.70-M79.79, R51.1-R52.9 (chronic unbearable pain) from 2015 to 2020 in the family medicine clinic

Results: In the five-year period, the family medicine practice with over 2300 registered adult patients recorded 14 patients suspected of suffering from fibromyalgia. They were referred to tertiary centre URI Soča for additional diagnostic and treatment. The disease was confirmed in nine cases. During that same period, the practice also managed 32 patients with chronic unbearable pain, which did not meet the fibromyalgia criteria. Diagnostics showed that the pain is of somatic origin in most of the 32 patients. Our research has shown that none of those patients identified for themselves as fibromyalgia based on "dr. Google". Their reason for the appointment at the family practice was pain, psychological problems, sick leaves and the desire to retire.

Conclusion: I believe that the approved diagnostics criteria for the fibromyalgia disease need to be used consistently. An interdisciplinary cooperation of family medicine, physical medicine and rehabilitation, occupational, transport and sports medicine specialists, appointed physicians and those working in the framework of retirement institution ZPIZ is vital.

Psychological Aspects of Chronic Non-malignant Pain

Author: Barbara Horvat Rauter, PhD, specializing in clinical psychology, University Rehabilitation Institute of the Republic of Slovenia, Ljubljana, Slovenia

Keywords: chronic non-malignant pain, risk factors, psychological consequences, psychological treatment

Abstract: Chronic non-malignant pain is a multidimensional experience as it involves both an uncomfortable sensory as well as emotional experience associated with actual or potential tissue damage. According to literature, up to 20 % of individuals experience chronic pain during their lifetime, therefore dealing with chronic pain is of great importance. Because chronic pain symptomatology involves the patient's biological and personality factors and the cultural and social environment, bio-psycho-social treatment is required.

The aim of this paper is to present chronic pain from the view of a psychologist. We will briefly present various psychological theories of chronic pain, we will also discuss risk factors (individual and interpersonal) and maintenance factors of pain symptomatology. The main topic will be devoted to the consequences of chronic pain.

With prolonged persistence of daily pain symptoms, coping with them becomes increasingly stressful, resulting in the overall functioning of the individual - on the cognitive (mental), emotional and behavioural levels. The content of thoughts often changes and is focused on problem situations and pain symptoms. Catastrophizing in the form of ruminations and magnifications is often common. Stressful pain experience can lead to changes in the formal area - impaired attention capacity, impaired memory and slower information processing. In patients with chronic pain, long-term illness usually results in uncomfortable emotions, most often in experiencing anxiety, sadness, anger, feelings of helplessness and insecurity with the thought of whether it will ever be good at all. Relatively common are more severe psychiatric disorders like depression and anxiety, substance abuse and addiction, disorders with physical symptoms. In general, coping with pain harms the quality of life of the individual. Patients are more passive due to experiencing pain, which is why many of them report having impoverished social life and problems at work as they are unable to qualitatively and effectively fit into the demands and duties imposed on them by full-time work.

In general, chronic pain changes and limits the patient's daily life activities, and gradually the patient's personality itself. In the concluding part of this topic, we will present the most established forms of psychological help and support.

Fibromyalgia from the Perspective of a Neurologist

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Keywords: fibromyalgia, clinical presentation, pathophysiology, treatment

Abstract: Fibromyalgia (FM) is a medical condition that includes widespread physical pain without tissue damage and which the patient is not simulating. FM is a disease which is defined with all of its dimensions. In the neurological sense, FM is understood as a primary neurocognitive disease. It is the consequence of genetic and environmental factors. The interoceptive pain model is used as the basis for understanding FM. The characteristic of FM is increased sensitivity to local applied pressure, which proves the integration of sensory signals in the representative body scheme are disrupted. The integration process is related to the assumptions which are the consequence of previous life experiences of the individual. The processing of sensory signals, such as nociception, is not just the consequence of the transfer of sensory information from the body's periphery to the brain, but vice versa as well. Thus, the existing mental representations on the body have a significant impact on the pain perception. Some parts of the extensive pain can be explained with a randomly identified neurological impairment. The information process, the predicted coding, explains why the uncertainty of prediction may lead to associated mood disorders that are characteristic for FM.

The FM patient's medical history may reveal widespread pain, sleep and emotional disorders and fatigue, which represent the clinical correlation of central sensitisation. A neurological exam may identify motoric and sensory disorders, balance and brain nerve impairment. A cognitive examination may reveal memory impairments, attention deficit, disorganised thinking. The latter is related to pain intensity and mood disorders. The self-assessed neurological and cognitive problems are usually worse than the objective results. A complete impairment of the central and peripheral nerve system generally remains undetected even with neurological and additional inspections. FM is a disease which disables patients, makes them unable to work, to live a social life and to perform their social roles. The FM value system is very disrupted, which opens up the question of a broader sense of life. FM is therefore treated within the neurological biopsychosocial model.Treatment of the central sensitisation may be efficient with antiepileptics and antidepressants. Monitoring the mental representation is an important part of the treatment process. The goal of the treatment process is to improve the patient's functional state.

Fibromyalgia from the Psychiatric Perspective

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Keywords: fibromyalgia, stress, functionality, beliefs of psychiatrists

Background: In psychosomatics, the need to tolerate a high degree of etiological ambiguity is particularly defined, which requires professional self-reflection. Otherwise, psychiatrists can develop overly polarised beliefs regarding the nature of fibromyalgia. The typical psychiatric perspective has a role in identifying highly prevalent comorbidity of mental disorders and fibromyalgia. There is less certainty about the role of psychiatry in the treatment and assessment of the work functionality of these patients. Fibromyalgia requires a very strong empathy (which does not mean agreeing to all of the patients' expectations) with the subjectivity of patients who report their symptoms of fatigue, cognition and sleep disorders, diffuse pain, experience activation as harmful, and can often be perceived as disproportionately persistent in their claims. The role of "difficult patient" can be co-created with experiences of misunderstanding in a medical context.

Methods: Convincing neuroscientific evidences noted altered central processing of sensory input in terms of central sensitization and dysfunctional stress processing of efferent pathways; other processes at the level of the social brain and immunity are also involved.

Results: From the psychiatric perspective, the severity of co-morbide mood disorders, anxiety and stress-related disorders, cognitive functions, harmful use of benzodiazepines or psychotropic analgesics and any clinically important personality traits, behavioural coping strategies, and work norms and values should be assessed.

Conclusions: Basic psychiatric concept of mental health is the ability to maintain relationships and one's working ability. From the perspective of central processing of pain and disturbances in stress management of fibromyalgia, even without other psychiatric comorbidities, reduction of sources of tension is supported: not norm work, not with an imposed rhythm of work, not at night. However, the assessment of shortening working hours and other work-load reductions should be personalised, while partial activation is perceived as maintaining the healthy potential of a patient with fibromyalgia.

Team Medical Examination in Subspecial Rehabilitation Clinic of Persons with Fibromyalgia Syndrome and Other Forms of Chronic Pain: Decisions on referrals to the Disability Commission

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Keywords: chronic pain, work capacity, rehabilitation

Introduction: The article provides an analysis of decision making on remaining work capacity in the scope of the triage assessment procedure (TAP) aimed mainly at determining a patient's ability to be included in the interdisciplinary rehabilitation program for patients with chronic pain.

Methods: The work includes everyone who underwent TAP from February to November 2019. They are divided into groups based on the final team decisions. Referral to the Disability Commission, 1st group: not proposed; 2nd group: proposed, restrictions are undefined; 3rd group: proposed reduced working hours; 4th group: full retirement; 5th group: substantive restrictions or retraining. Presented are the differences based on pain intensity and extent, the fulfilment of the criteria for the fibromyalgia syndrome (FMS), the existence of comorbidity, employment status, sick leave and education.

Results: 471 persons were included, 15 % male (average age of 48.4 years), 85 % female (average age 50.6 years). The first group included 58 % of persons (60 % met the FMS criteria), the second group 10 % (86 % met the FMS criteria), the third group 8 % (92 % met the FMS criteria), while the fourth and fifth groups included 1 %. The remaining participants were high school students, university students and pensioners. The first group included many people with less secure forms of employment (sole proprietors, temporary employment – 14-16 %, not present in other groups); the second group included more unemployed persons – 40 % (16-23 % in other groups, excluding the fourth), with comorbidity – 83 % (63-73 % in other groups, excluding the fourth) and more – 50 % with elementary education (7-21 % in other groups); all participants in the fourth group had comorbid psychiatric illnesses and long-term occupational inactivity. There were no significant differences in pain intensity (NPRS 6.6; SD 1.84), most cases had chronic widespread pain regardless of FMS criteria being met or not.

Discussion and conclusion: In almost 20 % of referrals we made assessments regarding the remaining work capacity, where rehabilitation measures would no longer have an impact on their work capacity. The article widely outlines the dilemmas related to assessments based on all the information acquired in the study.

Early Return to Work for Persons with Fibromyalgia

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Keywords: fibromyalgia, work capacity, early vocational rehabilitation, quality of life

Background/issue/problem: Long-term chronic musculoskeletal pain greatly affects the quality of life of a patient and their working ability. The work capacity of the majority of patients suffering from fibromyalgia is reduced, however 34-77 % of them continue to work. The illnesses that cause chronic pain in muscles and joints are the most common reason for disability retirement around the world.

Most patients suffering from fibromyalgia are women. Studies report there are 10-15 % of men suffering from the illness. The prevalence of women with fibromyalgia is between 0.75-4.9 % in the population.

Persons with fibromyalgia report the following symptoms as having the most impact on their working ability: pain, fatigue, reduced muscle strength and memory and concentration problems.

Methods: We have studied the available literature and considered the experience of persons included in fibromyalgia treatments at the Vocational Rehabilitation Centre, URI Soča. We use the biopsychosocial model for assessing the working capacity of the persons with fibromyalgia: the assessment of their ability, job performance and employment status, while also considering the following additional factors: driving to/from work, the option of gaining employment in the local environment, specific life situation of the person concerned.

Results: The factors which show the likelihood of sick leave for women already in the first year after being diagnosed with fibromyalgia are: youth, poor physical activity, increased pain, poor pain management and low education.

The early return to work process needs to be initiated as soon as possible. Preventive measures may prevent the progression of the illness.

Important work burdens for persons suffering from fibromyalgia include: hard physical labour, work tasks above shoulder level, strong squeezing of hands, frequent load transport and lifting, prolonged static positions, forced work rhythm and high tempo, one-sided muscular and monotonous work, overtime work, working in shifts and night shifts, as well as working in cold environments and in draught.

Individually planned work adjustments and adjustments to the work area must comply with the actual capacities of the person with fibromyalgia. They must be agreed with the employer and the concerned person. It is important

to have the exact know-how of the working requirements, the burdens and harmful factors. We use long-lasting tests for the persons with fibromyalgia by testing them at the adapted workplace and by gradually increasing their working hours. The adjusted lifestyle for persons with fibromyalgia and the comprehensive psychosocial working environment are an important factor for the successful early return to work.

Conclusions/findings: The measures for the prevention of the development and occurrence of chronic pain, early diagnostics and modern treatments, as well as the comprehensive rehabilitation with early vocational rehabilitation may all contribute to the retention of the employment and increased quality of life for persons suffering from fibromyalgia.

Experience of a Forensic Expert Relating to Fibromyalgia

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Keywords: fibromyalgia, disability committee, sick leave, quick return to the working process

Patients with chronic widespread pain bear a high burden of symptoms which lead to the drop of the quality of life, general vital functions and the ability to work. They therefore visit their general practitioner more often, they have several health check-ups at one or various hospitals with various specialists, who are often not coordinated in their method of work, in the diagnostics process and in the therapeutic process. The pain forces them into a lengthy sick leave, which gradually ends with the disability process and almost never ends with the disability retirement. The waiting period of such patients, where they wait for the hearing without an appropriate therapy for many years, brings them to a vicious circle which hurts both the patient as well as their environment.

My experience so far as a court expert in lawsuits of people with fibromyalgia are linked mainly to lawsuits concerning expert opinions of disability committees at ZPIZ. In all cases involved workers with category III disability, confirmed at the disability committee of the second degree. The basis for the disability were musculoskeletal disorders, most often back pain, and later joined by a psychiatric diagnosis (depression). The disability committee did not place fibromyalgia as the number one diagnosis in any of the discussed cases. The decision of disability committees always triggered a severe depressive episode, causing more pain to the patient and greater isolation. As a category III disability holder, the worker became unemployable, isolated, and dismissed from work following the disability committee hearing because there was no suitable work for the worker, he was pushed to the social edge and was a burden for himself and his relatives.

Plaintiffs and patients deal with the various relationships of those who treat them in the diagnostics and treatment process, with the treatment fragmentation, lack of time for treatment and mainly the feeling of entrapment. When they feel they are not being understood by experts, they lean to cancel their treatment. Workers with fibromyalgia need a sufficient amount of time for checks and treatments, better coordination of activities within and between the health and social departments, and an immediate coordinated complex therapy, which would also include the return to the working process.

Dissemination of Good Absenteeism Management Practices among Employers at the Regional Level

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Keywords: sick leave, return to work, employer participation

Background: Sick leave is a negative indicator of the active (working) population's health. We at ZZZS have been seeing a constant growth of this indicator in recent years, which is also one of the reasons for the increased expenses paid out as compensation fees. An appointed physician at the regional unit of ZZZS participates closely with the chosen GP of the patient, he rarely works with ZPIZ and, if needed, the physician also works with the patient, whereas there is virtually no contact with employers. We believe that the return to work process is hindered without this contact or cooperation with employers.

Methods: We at the department for appointed physicians at ZZZS Ravne na Koroškem have formed guidelines for our work in order to implement a quicker activation of the insured persons and not to miss the window of opportunity (3-6 months of SL) in frequent health problems (MKB groups M, F, I, J). We therefore tried implementing simpler work in cooperation with some employers and the occupational medicine. We believe that the earliest possible (and stable) return to work provides for a better social integration and social security.

Results: Our experiences in contacting 3 employers have shown that:

- employers wish to be a party in the decision-making process on the right to SL,
- they wish to send information on their work positions,
- they would like to know when the employee may return to work, they need more information,
- they may also pay for the specialist when waiting times are too long,
- an individual plan of measures is formed for the duration of the SL,
- they would like to have more contact with personal physicians at ZZZS; they find it a pity that there are no more infirmaries,
- there is lack of communication within the profession,
- they believe that the sick leave is set too high,
- the opinions of occupational medicine should be used as expert opinions in the decisions of the appointed physicians.

Conclusion: Based on the initial contacts in order to better understand the employers, we have prepared a structured survey for employers at Koroška in order to quantitatively assess their viewpoints regarding the health and return to work.

Financial-Medical Control in Orthopaedics and Rehabilitation

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Keywords: financial-medical control, orthopaedics, rehabilitation

Abstract: An insured person with locomotor system problems generally visits their GP first. When their care is insufficient, the diagnostics and treatment procedures are continued at other specialists and physiotherapists. Some persons require surgery and postoperative rehabilitation, some even thermal cure. The health services provided are recorded and charged under the models specific for each area. The information on the charged services also serves as the basis for financial - medical controls. The correctness of services may be checked for each area where the insured person received treatment. This article provides a detailed insight into the financial-medical control in an orthopaedic and physical medicine and rehabilitation clinic, the billing of acute hospital treatment, primary level physiotherapy services and postoperative rehabilitation.

The financial medical supervisor needs to know a number of areas in order to perform the control correctly, such as, the billing model for the area and the legislation governing the supervisory activity, which includes the Health Care and Health Insurance Act (ZZVZZ), the Rules on Compulsory Health Insurance (OZZ), the General Agreement (SD), etc. Controllers undergo regular education sessions to retain the necessary scope of expertise. We participate at expert meetings of various professions as speakers and listeners. In 2020 we successfully completed the first training programme "The basics of medical assessment and insurance medicine", among other things.

The First Graduates in Medical Expertise and Insurance Medicine in Slovenia

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Keywords: insurance medicine, medical expertise, education

Issue: The needs of society since the independence of Slovenia in 1991 have led to the emergence of a new medical profession, formed through the work tasks of doctors in two public institutions: the National Health Insurance Institute of Slovenia (Institute) and the Pension and Disability Insurance Institute of Slovenia. The Section for Medical Expertise and Insurance Medicine (Section) at the Slovenian Medical Association (SMA) has prepared and carried out the first systematic education in this field in Slovenia with full support of the Institute.

Description: The program for special knowledge in medical expertise and insurance medicine was approved by the General Expert Council (GEC) of the SMA and included lectures on health insurance systems, legal acts regulating health care, models of accounting health services, financial medical auditing and work capacity assessment.

Results: The Medical Chamber of Slovenia also approved the training program and awarded it 50 credit points. In accordance with the program, 50 out of 400 hours of training were organised in the form of lectures and seminars, which took place from September 2018 to September 2019. The practical part of the training (financial medical auditing, expert opinions, decisions on compulsory health insurance rights) took place in parallel all year in 2019. Participants filled in the participant's sheet (attendance at lectures, recording of practical assignments) and their communication skills were constantly assessed. The first training was successfully completed by 50 participants. The GEC SMA confirmed the award of diplomas for medical doctors and dentists. Thus, Slovenia received the first graduates in the field of medical expertise and insurance medicine.

Lessons: The complexity of education for special knowledge requires a responsive and numerous organising committee, as well as the sufficient availability of mentors for practical knowledge. It is necessary to have quality educational materials. The next education session is planned to be in 2022.

Early Vocational Rehabilitation in the Return to Work Process

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Keywords: comprehensive vocational rehabilitation, interinstitutional cooperation between institutions/ departments, early return to work

Background: The negative indicators regarding the workers' health conditions are increasing in Slovenia, mainly in terms of sick leave and disability retirement of the various degrees. The reasons lie mainly in the increased exclusions of health impaired workers from the labour market and the ageing of the working population. The long-term unchanged situation requires measures on the national level.

Methods: At the initiative of the Ministry of Labour, Family, Social Affairs and Equal Opportunities, the Early Vocational Rehabilitation in the Return to Work Process was started in May 2020 under the guidance of the professional team at URI Soča, which is co-financed by the Republic of Slovenia and the European Union from the European Social Fund. The central activity of the project is the pilot testing of the new comprehensive vocational and employment rehabilitation.

Results: The project is in the implementation phase. In order to successfully implement the project activities and upgrade the existing vocational rehabilitation model, we employed 5 professional workers. Four of them have been placed at the entry information-coordination point meant for insured persons and employers, who will be tasked to provide relevant information and manage each case in the pilot project. The fifth co-worker is responsible for the cooperation with the decision-makers, to ensure cross-sectoral connection and to build a broader social consensus. An analysis was made of the situation in vocational rehabilitation in Slovenia, Germany and the Netherlands, which represents additional professional baselines. Tools for an on-going evaluation of the pilot project were also prepared. We have published the project's website and promotional materials and presented the project at various professional meetings. During the meetings of the development group and the webinar, we met the most important professional workers who will be key in the implementation of the pilot project.

Findings: We were aware already in the preparatory phase of the project that it will be very challenging to achieve the main goal. It falls within the legislation of the Pension and Disability Insurance Institute of the Republic of Slovenia, the Employment Service of Slovenia and the Health Insurance Institute of the Republic of Slovenia or their respective ministries. It requires the participation and commitment of the professional workers in various fields, mainly medical doctors, occupational, transport and sports medicine specialists who are currently occupied mainly with other tasks. The set goals will only be achieved with the close cooperation and adaptations of everyone involved.

Musculoskeletal Disorders and Work Ability Assessment

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Keywords: musculoskeletal disorders, risk factors, work ability assessment

Summary: Musculoskeletal disorders (MSDs) have been long known. Today, they represent a pandemic that greatly affects the health, activities and participation of subjects and the society as a whole. MSDs are considered to be a great burden for health care systems.

MSDs include a wide range of inflammatory and degenerative conditions affecting muscles, tendons, ligaments, joints, peripheral nerves, and blood vessels. These include clinical syndromes such as tendon inflammations and related conditions (tenosynovitis, epicondylitis, bursitis), nerve compression disorders (carpal tunnel syndrome, sciatica), low back pain and osteoarthrosis.

The most commonly affected body regions are: lower back, neck, shoulders and hands, although recently the lower extremities have received more attention.

MSDs are prevalent across the course of life and are the leading cause of disability worldwide, with pain and limited functioning being the most prominent features.

They represent a major proportion of work-related disorders in the EU and affect workers in the various sectors and professions with substantial costs and impacts on the quality of life.

Three in every five workers in the EU complain of MSDs, with low back pain and muscular pain in upper extremities being the most common. It is estimated that 60 % of workers in the EU see MSD as the most serious problem.

When assessing a patient's work capability, we try to strike a balance between the worker's ability/capability and demands of their working place. In addition to the health status, biological and psychophysical factors of the worker must also be taken into consideration.

The most common MSDs, subsequent functional limitations and their impact on work assessment ability are presented in this article, as are the risk factors for work-related MSDs.

Assessing the Permanent Consequences of Damage to the Locomotor Apparatus in Commercial Insurance Companies

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Keywords: insurance company, accident, injury, disability, musculoskeletal system

The article shows the assessment process of permanent consequences (disability) due to some injuries sustained to the locomotor apparatus in view of insurance conditions in three commercial insurance companies in Slovenia. The insurance companies have been named A, B and C, where the insurance conditions for the same functional consequences of the same injury had been considered. Each insurance company defines different methods and approaches in determining the disability in their terms and conditions, thus various disability percentages are given for the same injury as they are based on different methodologies for determining the consequences and disability status. In view of the commercial insurance companies, disability that occurred after sustaining certain injuries is based on the insurance terms and conditions of each insurance company (the disability table and the attached general terms and conditions), which differ from each other and frequently lead to the confusion and misunderstanding of the insured persons when determining the final disability percentage regarding the functional and anatomical changes after each injury. Shown are the examples of determining permanent consequences due to the injury to the rotator cuff in the shoulder and knee joints with laceration to the anterior cruciate ligament and medial meniscus, which are some of the more frequent claims submitted by the insured persons for the assessment of their disability.

Musculoskeletal Pain, Work Capacity and Sick Leave in Slovenia and Abroad, Then and Now

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Keywords: chronic pain, treatment, opioid painkillers

Pain is one of the oldest and least understood issues in medicine, especially by doctors. In 3400 BC, the people in ancient Egypt placed aching extremities into water full of electric eels and fishes that mitigated pain in arthritis injuries with their electric shocks. In the middle ages, they used a wide assortment of various herbs. In the 17th century, doctors in Europe began using opium to relieve pain. Ether and chloroform made themselves known as painkillers during surgery procedures up to 1800, which allowed longer and more complicated surgical operations to be performed pain-free for patients. At the start of the 20th century, morphine and heroin were used as painkillers, which effectively reduced or removed pain, but also caused heavy addictions, which placed doctors in front of a huge dilemma as to which painkillers still present a benefit for the patient and in what quantities without damaging their health even further. These were the times of deep discussions about chronic pain that had no clear physical cause, was dependant on several other factors and which proved to be one of the hardest curable health conditions. There were excessive prescriptions and abuses of opioid painkillers in America, which led to severe addictions, an increase in depressions and even suicides. Similar issues were noted elsewhere in other developed countries, such as Canada, Australia and Brazil. Africa is faced with the large problem of insufficient treatments (or lack thereof) of pain due to the poor availability of medicines and awareness of both health workers as well as patients. A multidisciplinary approach is being implemented in both Europe and Russia, where in addition to treatments with medicines, psychotherapy, acupuncture and other non-pharmaceutical treatment methods for chronic pain are being used and even recommended. The world is becoming increasingly aware that insufficient treatment of chronic pain leads to several negative implications for the health system.

Expert in Social Disputes

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Keywords: social dispute, special expert knowledge, aid of the judge, results and opinion, rights and obligations of the expert

The abstract includes legal bases which define the appointment of examining physicians, their modus operandi and their rights and obligations in court proceedings in social disputes. Expert knowledge from a different non-legal field, which the judge does not have, may be necessary for the correct identification of the actual situation in certain disputes. In social disputes, this mainly includes knowledge of the medical field because decisions on certain rights stemming from the retirement, disability and health insurance, as well as in some other cases, require the identification of the person's health condition and the impact thereof on the person's functioning in the domestic and/or working environment. In order to identify the situation correctly, the parties to the proceedings, or the judge himself/herself, may propose to include an examining physician's opinion. The examining physician is generally appointed from the list of court experts. Multiple experts may be appointed in more complex cases, or an expert opinion may be certified by an expert institution.

The judge defines the subject-matter of the expert work in the decision on the appointment of an expert and includes the disputed issues between the parties. The judge also provides all the relevant material that was obtained during the confirmatory procedure. The expert prepares the opinion in writing or provides it orally at the main hearing. The expert is obligated to respect the abstract rules of science and the trade. The opinion must be clarified and understandable to laypersons. The expert opinion is not a document of proof that prevails over all the other evidence.

Presented is also the court practice which relates to the work of experts in social disputes.

Trends in Spine Surgery – Should We Avoid Deformity Surgery in Adults?

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Keywords: spine deformities, adult idiophatic deformity (AID), treatment, surgery, functional outcome

Background/Issue/Problem: The "de novo" adult idiophatic deformities represent a range of radiographic spinal changes, including stenosis, spondylolisthesis, rotational subluxation, loss of lumbar lordosis (sagittal imbalance) and osteoporosis. All these changes correlate to an asymmetric subsidence of the intervertebral discs. In a population over 50 years of age, 30 percent of people exert an X-ray confirmed signs of degenerative scoliosis. Among 50-year-olds without degenerative scoliosis, the diagnosis will occur in 37%, while only in 6% will the deformity be clinically relevant. The severity of deformities increases with age and usually progresses slowly. Whereas the curves are mostly below 20 degrees, those with over 30 degrees have a higher chance of deteriorating. Other reasons for deteriorations may also be possible. It is important to note that the clinical presentation, mostly pain, does not correlate with the size of the deformity.

Methods: There are many dilemmas regarding the methods of treatment for degenerative spinal deformities. Studies have shown that surgical treatment of symptomatic degenerative spinal deformities shows more improvement compared to conservative treatment. Choosing the suitable surgical treatment is challenging and depends on many parameters. We decide between the decompression of neural structures, spinal fusion (spondylodesis), correction of the deformity, and then between the various correction techniques (anterior/posterior correction, combined approach).

Results: The current recommendations suggest decompression only for minimal deformities below 10 degrees, without significant lower back pain, with only radicular pain. For deformities of approx. 20 degrees, the recommendation is decompression with a short spondylodesis without major corrections of the deformity. For deformities beyond 30 degrees, decompression and full correction are recommended, by correcting both the coronary and mainly the sagittal imbalance. The aggressiveness of the surgical approach also increases the chance of complications, assessed to be over 30% in major corrections. Treating perioperative and early operative complications is very important because they do not affect the long-term satisfaction of patients.

Conclusions/Findings: Surgical treatment of symptomatic degenerative spinal deformities has an advantage over conservative treatment. Surgical treatment must be carefully planned and adjusted to each individual patient and their problems. The working population usually cannot perform heavy physical activities after undergoing surgery for significant spinal deformities, but they do have a much better quality of life.

Surgery vs Conservative Treatment for Rotator Cuff Tear

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Keywords: rotator cuff, degeneration, surgery indications, treatment

The rotator cuff rupture is the most common cause of shoulder pain. Rupture is mostly the consequence of the degenerative disease of the rotator cuff tendon, which is strongly linked to ageing. The natural course of the rotator cuff tendon ruptures leads to the expansion of the rupture, the further degeneration of muscles and the gradual loss of the shoulder function. Understanding the natural course of rotator cuff ruptures and knowing that the patient's age, as well as the age and size of the rupture and muscle degeneration, impact the healing success rate of tendons is helpful to us in choosing the means of treatment. A rotator cuff rupture may be treated conservatively or surgically. Conservative treatment consists of medication-based treatment and physiotherapy treatment. In surgical treatment, we sew the ruptured tendon to the bone in the sense of open surgery or arthroscopic surgery with the help of anchors or bone tunnels. A conservative treatment is chosen in the event of minor partial ruptures and extensive and stagnated ruptures (surgical reconstruction no longer possible or the corresponding muscles have degenerated too much). A conservative treatment is also chosen with patients where the risk posed by an operation is too high due to their associated illnesses. We opt for surgery in the event of major partial ruptures, ruptures across the entire tendon and massive ruptures where muscles do not yet show signs of degeneration. We also opt for surgery when the pain and poor function persist despite conservative treatment. The decision regarding the means of treating the rotator cuff rupture must therefore be tailored to each individual patient.

Hip Arthroscopy – Indications, Expected Outcome and Ability to Return to Work

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Keywords: hip arthroscopy, indications, prognosis, ability to return to work

Historically, surgical treatment of non-arthritic hip disorders has been challenging due to the limited access to the hip joint and the complexity of its anatomy. Recent technical advances made possible to fully observe the hip joint via the scope. In 2004, the concept of femoroacetabular impingement (FAI) was introduced and instantly popularized the hip arthroscopy as therapeutic procedure. Since then, hip arthroscopy has been utilized as a safe and reliable treatment of wide spectrum of hip disorders. During arthroscopy it is possible to treat lesions responsible for pain, the acetabular labrum rupture and cartilage lesions in particular, and to prevent further damage by restoring the anatomy of the joint. After arthroscopic intervention on hip and with appropriate rehabilitation it is possible to improve quality of life but it is still unclear if it can satisfy our ultimate goal to slow down the process of degeneration or even to prevent osteoarthritis. Although the overall complication rate is low, end results are not always satisfactory. Recently identified negative prognostic factors are preoperative osteoarthritis (grade II or higher), patient's age 45 or older, high BMI, missed structural abnormalities (i.e. acetabular dysplasia, FAI or combination of both) and prolonged time course between injury and surgical treatment. Some of listed factors have been proven to decrease the ability to return to work and sports but publications with quality evidence regarding this topic are scarce. In our praxis and compared to other joints, hip demands more personalized and longer rehabilitation. Patients who underwent hip arthroscopy should be evaluated periodically for their ability to tolerate physical loads on their job due to possibility to develop secondary osteoarthritis despite treatment. Further quality studies are encouraged to identify those clinical, anthropometric and psychological parameters that may have significant influence on the ability to return to work or sports.

Missed Pathology in Patients with Poor Functional Results Post-Knee Arthroplasty

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Keywords: knee, arthroplasty, unsuccessful treatment, pain

Expert Cooperation: Area Overview

Background: As opposed to the hip arthroplasty, where subjective satisfaction with the artificial joint is achieved in more than 90 % of patients, the percentage for artificial knees is significantly lower. Less than 80 % of patients are satisfied, whereby the condition of the majority of the less satisfied is much better than the condition prior to surgery. Patients are mostly dissatisfied due to pain, limited movement, instability or a combination of reasons.

Problem: The knee joint replacement pursues a different concept than the hip replacement. The main difference is that prostheses of the same shape are used to replace knee joints of very different morphologies. The reasons behind encoutered issues vary and most of the time, multiple issues are present concurrently. Pain may be caused by the infection of the implant, a shaken implant, artificial knee instability, component malposition, corrosion, metallosis, implant breakage, periprosthetic bone fractures, soft tissue lesions around the joint, allergies, referred back pain, CREBS, arterial occlusion, vasculitis and other, rarer, reasons beyond the joint. Instability may be caused by the primary insufficiency of ligaments, an inappropriate size and/or position of the implant, an improper implant type or a trauma. Limited range of motion may be caused by an infection, an inappropriate size and/or a malposition of the implant, scarring proneness – arthrofibrosis, an inappropriate postoperative rehabilitation, the patient's non-cooperation, neurological deformities, and other, rarer, causes.

Diagnostics: Finding the cause of the problem is often very challenging. Sometimes, it is caused by a combination of minor deviations from the optimal condition which, on their own, would not be causing any issues, while together they may be very problematic. An algorithmic approach is necessary in diagnostics with the exclusion of the most probable causes.

Treatment of the problem: Surgery is indicated when the most likely diagnosis has been made. If the diagnosis cannot be made immediately, the patient shall not be treated. A regular follow-up usually allows for the diagnosis to become evident in time. It is better not to treat the cause, when facing a moderately severe problem which would require a very invasive and/or dangerous procedure. However, surgery is a reasonable choice for most of the cases, if the problems are very severe. The results of revision of failed artificial joints are not equivalent to the primary implants. Exceptionally, the treatment may also be non-surgical.

Foot and Ankle Pathology in Active Patients and Treatment Outcome

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Keywords: arthrosis, deformation, neuropatic foot, hallux valgus, hallux rigidus, tendinopathies, fasciopathies, sports injuries, treatment, rehabilitation, work ability

Background: A foot and ankle pathology is a frequent cause of chronic pain and poor function. The treatment success is not guaranteed and reaches 90 %. The time needed to return to work post operation and rehabilitation is generally 3-6 months, especially when the patient's work tasks include major physical strains and standing work.

Pathology, treatment and rehabilitation overview: The most common foot pathologies include deformed toes and hallux arthrosis. Milder forms are treated conservatively, comfortable footwear is recommended, otherwise surgery is indicated which requires a sick leave of 3 months for workers performing standing work. In foot and ankle arthrosis, surgery is often somewhat postponed when appropriate footwear is applied. If surgery is required, the impaired joints are most often fused. The healing process is lengthy, thus full burden may be applied no sooner than in 6 months post-surgery. In acute sports injuries, such as sprains and torn ligaments, treatment may last up to 6 weeks. When surgery is required, return to work is possible only after 3 to 5 months. Chronic heel pain is caused by permanent overuse injury, which leads to irreversible changes in the Achilles tendon, insertion tendinitis and plantar fasciitis. A conservative approach is 70-90 % successful, otherwise surgery is indicated, whereby rehabilitation lasts up to 6 months. Neuropathic changes on feet are incurable and are caused by diabetes, ethylism, polyneuropathy and other systemic factors. Symptoms are relatively successfully mitigated with conservative means in combination with complex surgery. Rehabilitation process is unpredictable, the medium-term prognosis is poor and the consequence is permanent disability.

Conclusion: The foot and ankle pathology, despite being a seemingly marginal issue, has a significant impact on the work ability in active patients. If the conservative approach is unsuccessful, then surgery is recommended. The latter often requires rehabilitation for several months because the area has multiple nerves and poor blood circulation, as well as a thin skin cover. This makes skin difficult to heal, swelling is present for many weeks, and the regeneration of the ligaments, bones or joints can take several months.

Predictors for Work Ability in Low-back and Neck Problems

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Keywords: back and neck pain, biopsychosocial treatment, work ability

Back and neck pain (BNP) has a significant impact on the health and functioning of people and represent a high burden to public health. The prevalence for chronic back pain is approx. 23 %, compared to 13 % for neck pain. BNP are usually present in the working population between the ages of 25 to 64 and are one of the more frequent sick leave causes. Acute BNP are often benign and they pass away within 6 to 8 weeks in 90 % of patients. In 10 % of patients, these may develop into chronic pain. BNP have a direct impact on health care costs and also lead to increased secondary costs due to absence from work, the decrease of one's work efficiency, premature retirement and functional hindrance. Less than 50 % of patients who suffer from reduced ability for more than one year ultimately return to their jobs, and almost no patient returns when they have suffered from the reduced ability for 2 or more years. The most common risk factors for frequent sick leaves in BNP patients include administrative work and frequent previous episodes.

The risk factors for BNP include age, gender, physical activities, overload, obesity and smoking. One of the main factors that affect the work ability in patients with spinal issues is pain. Several randomised controlled studies have shown that the interdisciplinary biopsychosocial treatment (BPST) makes it easier to deal with pain and to improve the patients' functioning much quicker than with the classic physical therapy. BPST also has a positive impact on the duration of sick leaves. Depression may develop in chronic BNP patients, as well as hypochondria, somatisation, kinesiophobia and catastrophisation.

Some of the negative predictive work ability factors in BNP patients also include inefficient treatment, inactivity, maintaining a damaging lifestyle, and the patient's lack of motivation. Positive predictive factors for the reduction of BNP sick leaves include motivation for work, good working conditions and relations at work, and dynamic work procedures. The evidence-based secondary prevention includes an interdisciplinary BPST and advice for an active lifestyle.

Vocational Rehabilitation and Workplace Adjustments

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Keywords: working disabled person, vocational rehabilitation, workplace adjustment

The insured persons who suffer from changing health conditions due to illness or injury may partially or completely lose their work ability. Complete inability to perform an organised or gainful work leads to disability retirement, which is the last measure in the scope of disability security. If the insured person has remaining work ability, then it is worth to seek or preserve employment with the help of the employment rehabilitation institute.
Vocational rehabilitation must not be a static form of aid to working disabled persons but requires the necessary adjustment of the organisation of work processes.
At the time of independence, Slovenia had the right to retraining or up-training needed for the insured person to perform another suitable work. In 1992, the new, and for the very first time, independent and comprehensive Slovenian pension and disability insurance system was implemented, which only renamed the above right to the right to vocational rehabilitation. Drastic changes in this area were made in 2000 with the Pension and Disability Insurance Act (ZPIZ-1) which, in addition to the purpose and obligations, is defined as the core right and obligation of a working disabled person. It is defined as a comprehensive process in which the insured person is not only professionally, physically and psychosocially trained for another profession or work, but they may also be trained to perform the same profession or work by having their workplace adjusted with appropriate technical accessories. ZPIZ-2 of 2013 summarises the definition and expands the methods of vocational rehabilitation with short-term training and education sessions (courses), while also increasing the age limit for acquiring the right (55 years, or 50 years if the insured person will perform their work part-time following the rehabilitation).
If the legislator is approaching the structure and organisation of the work processes, the same cannot be said for the expert approach in identifying the most favourable forms or methods of vocational rehabilitation. It is the interest of the institute to priorities adjustments of workplaces, to short-term train and educate persons or to train them at a specific workplace.

Maintaining the Work Ability of Employees through the Promotion of Health at Work: Practical Examples

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Keywords: promotion of health at work, maintaining one's work ability, good practice examples, occupational, transport and sports medicine

Abstract: The promotion of health at work is the effort of employers, employees and the company to improve the health and well-being of people at work. The care of the health of employees is also the primary task of the occupational medicine specialist, which is why the latter plays a very important role in the promotion of the health of employees. One of the core activities include the analysis of the health of employees and the risk analysis regarding work, participation in the planning process of measures and some other activities. This year marks the 10th anniversary when the promotion of health at work in Slovenia became compulsory by law. In line with the Health and Safety at Work Act (ZVZD-1), employers must plan and implement the promotion of health at work. The abstract shows how fields of work address the organisation thereof, as well as some good practice examples.

The Role of the Commission for Faculty Expert Opinions of MF UL in the Expert Work Ability Evaluation Process

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Keywords: medical expertise, work ability, evaluation

Throughout its long-standing expert practice, the Commission for Faculty Expert Opinions at the Faculty of Medicine, University of Ljubljana, has been performing the most complex expert work. The Commission is the body of the MF UL Senate and is, in essence, comprised of the most competent professionals in forensic medicine, traumatology (general surgery), orthopaedics and psychiatry. The Commission is managed by a president with a four-year mandate who, in line with the requirements of courts or other state bodies, appoints professionals who are tasked with carrying out the expert work. The Commission largely deals with resolutions for expert work in fields covered by the Labour and Social Court and its branches. The problems which the Commission discusses are mainly in the field of the labour legislation, namely the assessment of one's work ability, expert work in correctly assessing one's degree of disability, as well as expert work in deciding on sick leave eligibility and the reimbursement of treatment costs abroad. Based on the aforementioned areas, the president, after receiving court requests, assigns tasks to professionals who are required to provide an expert opinion.

Results: In 2019, the Commission discussed 96 expert cases via the Labour and Social Court and 52 complementary opinions with one or multiple amendments based on the notes provided by parties in the procedure. From the feedback available to the president of the Commission, the court confirmed the content of expert opinions and their respective amendments in 99 % of cases, while in 1 % of cases the court decided to engage an expert from abroad at the request of the parties in the procedure.

Conclusion: The Commission for Faculty Expert Opinions has seen a significant increase in the expert opinion requests at the highest expert level by the labour and social courts, which undoubtedly shows the ever increasing complexity of such expert work.

Analysis of Health Absenteeism due to Musculoskeletal Disorders in Slovenia

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Keywords: musculoskeletal disorders, epidemiology, health absenteeism

Background: As the most frequent work-related health problem, musculoskeletal disorders (MSDs) are a major health issue in Slovenia. The occurrence of MSDs is linked to degenerative processes, ageing, as well as the consequences of the changed way of life and work, poor lifestyle, obesity epidemic, and lack of physical activities among the active population. We expect MSDs, especially due to the increased work intensity and prolonged working lives, to remain the lead cause of health absenteeism and work-related disability.

Methods: The epidemiology of MSD was defined through the sick leave (SL) indicators. We analysed the SL trends due to MSDs from 2015 to 2019 based on gender and age, economic activities and regional units of ZZZS.

Results: MSDs are the cause for more than 20% of all lost working days due to health reasons, while the increase of SLs due to MSDs has been more significant in these last years. The SL percentage for all temporary incapacities for work increased by a total of 18% in the observed period, and by a staggering 43% due to MSDs. The increase of MSD-related SLs is mainly present among women. The number of lost days per employee in women increased by 55% from 2015 to 2019, and by 29% in men. The MSD incidence increases with age, with a peak in the age group from 45 to 64, while the duration of SLs is longest in employees aged 65 or more. For several years, the highest share of MSD-related SLs has been observed in the mining, agricultural, health and social security sectors, as well as in the processing industry. In terms of ZZZS regional units (RU), MSDs mostly occur at RU Krško, Ravne na Koroškem and Murska Sobota, while the lowest occurrence is at RU Nova Gorica and Ljubljana.

Conclusions: In order to combat the increasing MSD pandemic, systematic measures need to be introduced, directed in preventing and managing MSDs and ensuring a suitable rehabilitation and reintegration of workers with known MSDs to appropriate workplaces.

Outcomes after Periacetabular Osteotomies and Other Hip Preservation Procedures

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Keywords: hip joint, osteotomy, preservation surgery, outcome

Professional Collaboration: Medacta International Switzerland - adviser

Background: The aim of hip preservation procedures is to improve joint surface congruence and therefore optimise the distribution of forces generated within the joint. The consequence is the reduction of pain and the improvement of the quality of life and degeneration slowdown.

Methods: We have analysed the data published in the literature and from data bases of the Valdoltra Orthopaedic Hospital, with focus given to the treatment results of the periacetabular osteotomies (PAO), which are used to resolve problems of dysplastic acetabula; corrective osteotomies (OT) of the proximal femur, which are treatment options of congenital or obtained deformities of the proximal femur, and finally the procedures which resolve the femoroacetabular impingement (FAI), especially CAM type, where we perform an ablation of the osteochondral deformity on the femur neck. We also summarised the recommendations regarding the post-operative rehabilitation and activities.

Results: PAO
On average, the clinical result improves by 40-60 % compared to the pre-operative condition, or achieves between 85-90 % of the healthy joint level. Patients use crutches in the first three months after surgery, with toe-touch weight bearing during the first month, which is increased for 5-7 kg per week, up to full weight bearing. Return to work, if not physically demanding, is possible 3 months after the procedure if the OT has healed. Six to twelve months after surgery no activity restrictions are required.

Corrective OT of the proximal femur
The postoperative result depends mainly on the extent of the joint deformity. On average, the clinical result improves by more than half compared to the pre-operative condition or achieves between 80-90 % of the healthy joint level. The post-operative protocol is identical to that after PAO.

FAI-CAM
On average, the clinical result improves by more than 90 % compared to the pre-operative condition, or achieves approximately 95 % of the healthy joint level. Crutches are recommended during the first month, with weight bearing limitation to the point of pain. Return to work after one month is possible, if the work is not physical demanding. Three months after surgery, no activity restrictions are required.

Conclusions: According to the data published in the literature, which are completely comparable with the data obtained at our institution, hip preservation procedures, following the correct indication, are very successful and significantly delay the need for arthroplasty.

Hip Arthroplasty and Work Ability

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Keywords: hip replacement, employees, work ability

Arhroplasty is one of the most successful procedures in medicine indicated in patients with limited range of motion and pain during walking due to advanced wea, when conservative treatment have been exhausted or preserving procedures are no longer possible. The most common causes for arthroplasty are primary symptomatic wear, hip dysplasia, post-traumatic arthritis and aseptic necrosis. With good functional results, its disadvantage is gradual loosening, which can lead to a more complex revision surgery, thus making the decision for arthroplasty particular in young and active patients more difficult.

In the ten-year period spanning between 2010 and 2019, 6.823 assessments were given at the Disability Committee at ZPIZ concerning the wear of hips with arthroplasty, which represents 25 % of the locomotor pathology. 682 assessments were given on average per year, which grew from 530 to 670 in the last five years. Of these, 74 % were primary wears, 12 % were dysplastic, 8 % post-traumatic and 6 % were secondary wears, where bilateral pathology was in 35 % of cases. In 64 %, those undergoing the procedure were under 55 years of age, while in 63 % the pathology was, in contradiction with the general occurrence, present in men. 60 % of insured persons were workers performing hard or very hard manual labour. In 44 % of cases, the insured persons were capable of carrying out their work on a full time basis, 30 % in reduced (part) time, while 14 % of persons were assessed as being incapable of performing paid work or to undergo vocational rehabilitation. Vocational rehabilitation was done in 2 % of cases, while treatment was still on-going in the remaining share of persons.

Duration of seek leave, higher occupational position and obesity were an important pre-operative factor for employment, while pain level, mobility and satisfaction with the procedure were an important post-operative factor. Most often the insured persons are assessed as being able to perform other jobs with restrictions. However, because most of them are younger than 55 years of age, an adaptation of their existing workplace would be more suitable. In the event of a severe functional deficit or bilateral arthroplasty, it is more viable to reduce the person's work time and introduce work restrictions, if necessary.

Reasons for Hip Endoprosthesis Revision and Functional Outcome

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Keywords: hip endoprosthesis, revision, complications, loosening, functional result

In recent years, the Orthopaedic Surgery in Ljubljana has been carrying out up to 80 surgical revisions of hip endoprosthesis every year. The most common causes for the revision are aseptic loosening and the infection of the implant. The most common short-term complications of implanting a hip endoprosthesis include an infection and dislocation, while long-term reasons for revision mainly include the aseptic loosening of the artificial hip joint, which requires the replacement of one or both endoprosthetic parts.

An aseptic loosening of the endoprosthesis is the loss of firm grip of the endoprosthesis in the bone socket. It is most commonly caused by the wear of the endoprosthesis components and osteolysis. It is known today that the majority of parts that are isolated in the tissue following the hip endoprosthesis are made of polyethylene parts. These are generated due to the vibrations of the mobile prosthetic parts and the wear of the polyethylene acetabular insert, which is why we speak of a "polyethylene parts disease", which are the main cause for the aseptic loosening of the artificial hip joint. Another aetiology is represented by the poor initial stability of the implant, poor implant (insufficient geometry and surface treatment of the implant), which leads to the unsuccessful osteointegration of the implant, poor or incorrect placement of the implant during surgery and factors related to the patient (weight, activity rate).

An **infection of the endoprosthesis** is a rare complication that affects from 0.4 to 1.5 % of cases following the primary replacement of the hip joint. Despite its rarity, it is a very serious complication which may lead to the loss of the joint's function. Such infections require long-term antibiotic treatments, frequent removals or replacements of the endoprosthesis, extended hospital treatments and lengthy and complex rehabilitation, which significantly increases treatment costs.

Dislocations of hip endoprostheses affect up to 2 % of cases following the primary replacement of the hip joint. The complication is most common in the first three months or up to one year following the procedure. Risk factors include inadequate placement of the endoprosthesis' components, the type of implant (size of the femur head), the state of soft tissue, surgical approach. In the event of recurring dislocations, a surgical revision of the endoprosthesis' components is required.

Different length of legs is one of the main reasons for the patients' discontent following the placement of the hip endoprosthesis. Due to the larger difference in the length of legs (≥1.5cm), the patient suffers from limping, spinal pain, the patient also requires support when walking. In such situations, we frequently recommend using heel inserts for the leg that is shorter.

Prosthesis fractures are a rare complication with an incidence less than 1 %. Surgical treatment with osteosynthesis is usually required. If the prosthesis is loose, then the endoprosthesis needs to be replaced.
Fractures, mainly of femoral components of the endoprosthesis, are rare, the incidence is less than 0.27 %. These mostly occurred in modular femoral components with an exchangeable neck in patients with an increased body weight and high level of activity.

The occurrence of the **heterotopic ossification** following the hip arthroplasty is rare and somewhat more frequent in cases of post-traumatic wear in men. Patients are bothered by the poor movement, pain is rarer, most patients are asymptomatic. Extensive heterotopic ossifications cause pain and severe stiffness of the joint. A surgical removal of ossifications is required in such cases.

Following the primary or revision surgery of the hip endoprosthesis, the **patient's work ability assessment** should be personalised based on their physical and mental state and functional state of the respective hip joint. Patients are usually able to perform light, mostly seated or partially standing labour after two to three months following the insertion of an artificial hip joint, where they must not carry weight. They can also take up light and adjusted sports activities (cycling, Nordic walking, swimming, etc) based on their functional status.

Solutions to Severe Hip Related Complications

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Keywords: hip endoprosthesis, hip dysplasia, posttraumatic deformations, operation planning

Implantations of total hip endoprostheses (TEP) are successful operative procedures which reduce the pain level of patients and largely recover the functionality of the joint. Hip TEP implantations are successfully being carried out in the majority of Slovenian hospitals. The indications for operative procedures are primary and secondary arthroses of the hip joint, non-malign tumors of the proximal femur metaphysis, certain fractures of the femoral neck, pertrochanteric fractures and ruptures in the proximal third of the femur (usually in combination with the hip joint arthrosis).

The primary implantation of the hip endoprosthesis is a routine surgical procedure. In the event of changed anatomical conditions both on the femoral as well as acetabular side, the complexity of a successful TEP implementation is significantly increased.
Primary TEP implementations in adolescents are mainly complex due to the usually distinct anatomical irregularities:

- secondary arthrosis due to the hip joint dysplasia,
- conditions following an unsuccessful treatment of congenital joint dislocation,
- secondary arthrosis in juvenile rheumatic arthritis, recovered bacterial arthritis,
- conditions following injuries or diseases (Mb. Perthes, epiphysiolysis of the hip head, ICP, etc).

Complex TEP may be expected in active insured persons with certain secondary arthroses (following an avascular necrosis of the hip head, recovered inflammations of the hip joint, posttraumatic arthrosis, genetic dislocations or dysplasia, joint arthrodesis, osteoporosis, etc), in anatomic anomalies in the acetabular or femoral part (varus, valgus, acetabular retroversion, great trochanter deformations, etc).

The complexity of the primary hip TEP implantation is also increased by spinopelvic anomalies, spondylodesis conditions of the lumbar sacral spine, conditions following fractures of the pelvis and sacrum.

Planning such procedures also requires extensive diagnostics (CT, MR, X-ray imaging of the entire spine, 3D printing, digital moulds, 3D moulds for osteotomy, navigation), a more extensive preparation of the patient for the procedure, planning appropriate implants and more extensive surgery instruments.

Treatment usually requires an interdisciplinary approach (microbiologists, infectologists, traumatologists, rheumatologists, clinical pharmacists, anaesthesiologists, plastic surgeons, internists, etc).

Postoperative care and rehabilitation of patients is also more complex.

There are more postoperative complications.

In active insured patients, opinions on their remaining working capacity or disability also need to be given. A medical court opinion is sometimes required for patients with posttraumatic arthrosis and hip TEP implantations.

Vocational Rehabilitation after an Invasive Treatment of Femoral Bone Cancer

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Keywords: practical example, vocational rehabilitation, adjustments to the work place

Background: The presentation covers a systematic approach to vocational rehabilitation concerning a patient that underwent the treatment of femoral bone cancer. Focus was on cooperation of the various professional services and the inclusion of the employer as an active partner in the process.

Methods: Presentation of a targeted team treatment and draft of a return to work plan through a good practice example.

Results: The 42 year old patient, an economic-commercial technician who has been carrying out administrative duties for the same employer for 22 years, most recently as an assistant (secretary), underwent surgery in February 2016 due to an osteosarcoma of the right femur. A tumour endoprosthesis was inserted, followed by chemotherapy treatment. She was admitted to URI Soča, Vocational Rehabilitation Centre in January 2018. The rehabilitation team found major deviations in work endurance, she mainly suffered from fatigue and movement problems due to the disrupted hip. During treatment, she was faced with changes to her work functions and emotional distresses, due to which she was fatigued even more. She was referred to Dom IRIS, where she tried various accessories and technological solutions to aid her in her domestic and work environment. She also passed the driver's ability test at the clinic for drivers with special needs.

Due to the lengthy sick leave and permanent work ability, the process of recognising the disability insurance rights was set in motion at the recommendation of her general physician. The patient and her employer expressed an interest for vocational rehabilitation. She was therefore referred to URI Soča in May 2019 by the president of the disability committee for the purposes of an expert opinion to be made. The professional team worked with the employer and proposed vocational rehabilitation, training with practical work at a suitable workplace, concurrent short training and adjustment to the workplace in its final report of January 2020.

Findings: The practical example describes the work functioning of the patient from before the disease, during treatment and up to the treatment at the URI Soča rehabilitation team, as well as during and after vocational rehabilitation. The entire procedure is a reflection of the current operation and cooperation of the competent services when various procedures and systems intertwine.

Minimally Invasive Procedures for Low-back Pain

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Keywords: infiltration therapy, facet blocks, nucleoplasty, vertebroplasty, biopsy

The purpose of this article is to present the minimally invasive techniques used in diagnostics and treatment of pain in the lumbar region. Some of them are necessary methods of diagnostics, such as, for example, the biopsy of vertebrae in changes that require histopathology. Provocative discography, for example, is a procedure that is mainly important in diagnosing the so-called discogenic pain, but is being abandoned in good measure due to the proven trauma it causes to annulus fibrosus or the connective ring of the intervertebral disc. The ablation of facet joints is an important procedure because it is a method used both in diagnostics as well as in treatment. Patients with a proven disco-dural conflict can opt for a neuroforaminal infiltration or epidural/caudal block in the event of clear contraindications for surgery. An epidural/caudal block is one of the methods for treating spinal stenosis. It is a symptomatic treatment that does not resolve the cause of the problem. Pain due to the vertebral compression fracture, either due to osteoporosis, benign/malign tumours, or, rarely, trauma, can be treated with vertebroplasty/kyphoplasty. It is also used in treating bone pain in major hemangioma and metastasis pain. During kyphoplasty, we also opt for the partial/full recovery of the vertebral height. Much has also been discussed about percutaneous nucleotomy or nucleoplasty. We use these methods to access the intervertebral disc through the puncture point on the skin. Processes differ in the means of therapeutic activity in the intervertebral disc. Based on the method of activity, they are divided into chemical (chemonucleolysis with chymopapain, ozone and alcohol), mechanical (arthroscopic discectomy) and thermal (laser, intradiscal electrothermal annuloplasty, radiofrequency). The efficiency of nucleoplasty is poor to moderate. There is a consensus that the nucleoplasty procedure is efficient only in the intervertebral disc herniations without the complete rupture of the solid connective ring. Here, we need to consider that the height of the intervertebral disc is maintained by at least one half of its initial height. Often, the cause of pain are just painful muscles – enthesopathy, which may be resolved with a simple infiltration of the corticosteroid and anesthetic mix.

Impact of Major Spine Surgery on Pain and Work Ability

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Keywords: spondylodesis, rehabilitation, work burden, arthrodesis, spinal fusion

Abstract: Arthrodesis with instrumentation (spondylodesis) is a complex, expensive and time consuming surgical procedure with non-negligible postoperative biomechanical complications, such as, for example, progressive deformity at the cranial part of posterior instrumentation. Hospital treatment is specific to the individual based on the various lengths of surgical procedures, the number of levels of spinal fusion and the individual's age. They may be released to home care already on the second day (e.g. single level minimally invasive procedure) or no sooner than on the seventh day (e.g. six-level spondylodesis in an 82 year old). Everyone is discouraged from bending over (e.g. gardening), carrying weights (e.g. logs) and performing rotational movements in the lumbar section (e.g. tennis) because non-critical repetitive movements may cause degeneration of the neighbouring segment or wear and tear of the implanted material, which may get loose (e.g. screw breaking).

An aggressive rehabilitation with full working and sports activity, which applies to patients following a herniated disc surgery, is counterproductive in spondylodesis patients. An early initiation of rehabilitation a couple of weeks after spondylodesis impairs the functional result, increases treatment costs and reduces the comprehensive efficiency of treatment compared to the initiation of the rehabilitation process after two or three months.

After three months, patients may resume full-time work. Patients who need to lift weights in the scope of their work or who perform work with an ergonomically incorrect body posture (e.g. car mechanics), undergo a gradual transition to their old workplace by working part-time for a couple of weeks or full-time with temporary restrictions. In exceptional cases, when hard manual work is present and the workplace cannot be adapted (e.g. a smith), a full reintegration to the working process is recommended no sooner than after one year, when the follow-up X-ray imaging shows signs of new bone formation between the vertebrae. The insufficiency of the trunk muscles, often conditioned with a surgical procedure, causes mechanical lower back pain, which may lead to more frequent absences from work and doctor's appointments, which is why promoting exercises for strengthening the body stabilisers is key.

Lumbar Spinal Stenosis: Should I have Surgery and When?

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Keywords: spinal stenosis, neurogenic claudication, radiculopathy, treatment

Professional Cooperation: Treatment and rehabilitation and work ability prognosis

Background/Issue/Problem: The lumbar spinal stenosis is a constriction of the spinal channel and/or foramina, which include spinal nerves. After the age of 65, stenosis becomes one of the most common reasons for surgical treatment of the lumbar spine. It occurs more often in men (1.5:1) and the most frequently impaired region is L4-L5 (91 %). We have seen an increase in elevated BMI and genetic constriction of the spinal channel.

There are many types of spinal stenosis, by far the most frequent one being stenosis due to the various degenerations. One of the most common reasons for the compression of nerve structures include hypertrophic changes of apophyseal joints and the yellow ligament, in rare cases the bulge of intervertebral discs. Disc degeneration may lead to the degenerative slippage of the vertebrae or degenerative scoliosis of the lumbar spine. Both conditions additionally compress the spinal channel and intervertebral foramina.

In the pathophysical sense, the spinal stenosis is a chronic pressure and therefore an ischemia of cauda equina and/or spinal nerves. Problems are more pronounced during walks and they ease off during inactivity. A characteristic symptom of the lumbar spinal stenosis is neurogenic claudication. It is often the only symptom in central stenosis, while radicular symptoms may be present in lateral recess stenosis or foraminal stenosis. In the event of claudication pain, this needs to be distinguished from those that occur in peripheral artery diseases.

Methods/Results: Surgery is meant for patients with severe symptoms and those that underwent conservative treatment and failed. Surgical treatment of the lumbar spinal stenosis includes many various procedures. The compressed nerve structures need to be decompressed. If instability of the lumbar vertebrae (listhesis, scoliosis, segment instability, posttraumatic deformity) is also present, then the spine is fixated.

Conclusions/Findings: A lumbar spine decompression is a successful surgical procedure for relieving leg pain, and less successful in relieving lower back pain (mechanical pain). 60 % of patients see their condition significantly improve within three months after surgery, and an additional 15 % within two years. We have seen no improvement in approx. 1/4 of patients.

Failed Back Surgery Syndrome – When Is Revision Surgery a Good Idea?

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Keywords: failed back surgery syndrome, neuropathic pain, revision back surgery

Background: The failed back surgery syndrome is becoming a growing public health problem due to the expansion of indications in spine surgery as well as the ageing problem of the population. The syndrome represents the lack of improvement or deterioration of back pain and/or leg after the lumbar spine surgery. There are many reasons for the failed back surgery.

Methods: Appropriate literature was reviewed and certain possible reasons for the failed spine surgery were identified. Recently published articles in this field were discussed, as well as studies that had a larger number of cases with a longer tracking time. Articles which study the results of various treatment methods were also reviewed. A special focus was given to the option or success of revision lumbar spine surgery.

Results: Even though the aetiology of the failed back surgery syndrome is multi-factorial, we have detailed the possible pre-operative, operative and post-operative reasons. We have presented the possible methods of treating patients with the syndrome. Treatment should be multidisciplinary. Non-surgical treatments (analgesia modulation, physical therapy) and surgical treatments (re-release of the neurological structures, the option of failed implants, determining the changed parameters of the sagittal balance) need to be studied in detail as well.

Conclusions: A multidisciplinary approach in dealing with the problem is of big importance. The cooperation of spinal surgeons with psychologists, psychiatrists, rehabilitation medicine specialist and specialists for pain treatment and therapy is a necessary. Focus should be on choosing the correct patient and insisting on the appropriate indication for the primary lumbar spine surgery.

Employment Rehabilitation after a Spinal Cord Injury and Supported Employment

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Co-Author: Matic Kovše, MSc, soc. worker, Slovenia

Keywords: employment rehabilitation, spinal cord injury, supported employment

Background: The case concerns a 34-year-old male who is a food processing technician by trade and with a period of service of 1 month. At 16 he had a traffic accident where he suffered injuries to his spinal cord, making him a paraplegic. He is able to sit in and move the wheelchair independently and may also move from the wheelchair without help. In March 2016, ZRSZ referred him to the institute for a work ability assessment, where the opinion was given that the user should be given the status of a disabled person and included in employment rehabilitation programmes. In June 2016, in line with ZZRIZ, the person was acknowledged the status of a disabled person and the right to undergo employment rehabilitation. He was given the following restrictions: He may carry out light physical work in a sitting position, in favourable climate conditions where wheelchair access is possible.

Methods: In February 2017, the person applied to the ER programme, where he underwent training at the institute's work cabinets for the first two months, in order to prepare for the real working environment.

Following a two-month training at the cabinets, two attempts were made to reintroduce the person back to the working environment. With the help of the professional team, he underwent the appropriate training in September 2019. He did administrative works that included the review and draft of documents and reports, inspection of the equipment and maintenance, copying reports to CDs, photocopying, archiving. During training, the professional team also proposed adjustments to be made to the working environment necessary for the user to perform his work efficiently and without hindrance.

The following adjustments were necessary:

- Access to the working environment and the adjustment thereof to the usage of a wheelchair.
- Various works, but with structured working hours.
- Work at an appropriate pace.
- The option of taking additional breaks.
- Gradual familiarisation with works and tasks.
- Help of co-workers in transferring documents from the office to the remote main areas.

Results and conclusion: Despite the above adjustments, the professional team concluded the work efficiency had been lowered to 75 % due to the health problems.
With the above adjustments and planned technical adjustments, which improved the basic working conditions, the employer, with a suitable subsidised salary due to the low efficiency, employed the person in March 2018.

Shoulder Pain – Surgery or Conservative Treatment

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Keywords: shoulder pain, multifactorial reasons

Problem: The reasons behind shoulder pain are multifactorial. The most common ones include: problems related to the rotator cuff, glenohumeral joint, acromioclavicular joint and the transferred pain from the neighbouring regions. The key is the differential diagnostics between shoulder and neck pathology.
Each shoulder disease requires specific diagnostics and therapy treatment. Therapy is divided to conservative and surgery. The patient's choice is key. Both therapies bring good long-term results at the correct choice of the patient. One of the more important factors include the patient's expectations regarding the results. With an appropriate clinical and imaging diagnostics and the patient's cooperation and understanding of the treatment process, the choice of treatment has much more predictive results. The problem occurs when the diagnostics and therapy process is insufficiently carried out. This may lead to poor end results with persistence of the primary pain problem and the afunctional shoulder, sick leave extension and the patient's dissatisfaction. It has been evaluated that up to 15 % of patients in the developed world report on long-term shoulder pain up to a certain degree, despite the treatment.

Conclusions: The complex issue of shoulder pain requires an accurate knowledge of the reasons behind the problems and the possible conservative and surgery treatments. An accurate diagnosis, appropriate therapy and an informed and motivated patient are key for the good end results and a satisfied patient.

Treatment Options for Shoulder Instability

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Keywords: instability, conservative treatment, operation, stabilisation, rehabilitation

The shoulder is the most flexible joint in the human body which allows many various motions and daily activities. This, on the other hand, often leads to injuries which may lead to instability. The tissue surrounding the shoulder loosens due to the injury or other reasons, making the head of the humerus to slide past the edge of the joint socket or glenoid. Other structures which make and surround the shoulder ring (cartilage, capsule, labrum, bone, etc) may also be damaged. Shoulder instability symptoms may include pain during motion, sensitivity to touch, skipping, subluxations and luxations in certain extreme motions or sports activities.

Treatment should be initiated as soon as possible in order to prevent further injuries of other structures in recurrent sub/luxations. There are many treatment options. Conservative treatment may be initiated during the first phase and includes specific individual physiotherapy and appropriate exercises. If unsuccessful surgery is required. The surgery is based on the patient and instability type as well as any other present injuries. Surgery may be performed either arthroscopically or with an open technique. Surgery types may include the shrinkage or reduction of the shoulder capsule (very rarely), Bankart repair (re-fixation of the damaged ligament ring or labrum), Latarjet stabilisation procedure (coracoid bone block transfer due to the glenoid bone defect), tenodesis of the part of the subscapularis (ASA), remplissage (capsule fixation into the bone defect area on the humerus), stabilisation by transferring part of the bone (from the pelvis area or distal part of clavicula – autograft), by replacing the bone defect with allografts (distal tibia), xenograft, etc.

Following surgery, patients must wear a hand brace for approx. 6 weeks. They may carry out some exercises during this time. After 6 weeks, aggressive exercises and motions may be performed. After approx. two months, rehabilitation is continued in a health resort. After approx. 4 months, patients may also start exercising in a gym. After approx. 6 months, all activities are permitted.

Outcome and Disability after Shoulder Arthroplasty

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Keywords: shoulder prosthesis, disability

A shoulder arthroplasty is a planned procedure when the patient experiences pain and hindered movement in the shoulder joint. There are various reasons for that (sickness, tumour, injury). Physical therapy or other types of surgery do not produce the desired results in the shoulder joint.

There are various indications for shoulder arthroplasty. The possible pathologies include osteoarthritis, rheumatoid arthritis, vascular necroses, non-stable arthropathy, posttraumatic arthropathy, cuff arthropathy, primary and, more often, secondary tumours in the GH joint.

The main goal of shoulder arthroplasty is to reduce pain, followed by the functional improvement and overall improvement of the patient's well-being. The insertion of the shoulder prosthesis solely for restoring movement is mostly not justified.

The contraindication for inserting a shoulder prosthesis is similar as with other prostheses: an active infection in the joint, nerve defect, especially the defect of the axillary nerve.

Various forms are available to evaluate the results of the inserted shoulder prosthesis: NEER's operative 'test', CONSTANCE&MURLEY, UCLA, SFA36 DASH, SST, WOOS, WORC, WOSI, RC-QOL, OSS, as well as other tests.

The most objective evaluation of the success would probably include the separate evaluation of the following categories: pain, movement, function, patient satisfaction and X-ray stability of the shoulder prosthesis.

Complications following the insertion of the shoulder prosthesis are not rare. The average patient has 4 or 5 potential reasons for an unsuccessful surgery (e.g. the humeral retroversion may be linked to an unsuccessful surgery, and even more so the glenoid wear – e.g. B2 or C type).

Disability in Slovenia is defined by law: Article 63 of ZPIZ-2 (Definition of Disability) states that:

(1) Pursuant to this Act, the disability exists where, due to changes in the state of health which cannot be remedied by treatment or by measures of medical rehabilitation and which have been established in accordance with this Act, the capacity of an Insured Person to secure or maintain their position of employment or be promoted professionally has been reduced.

It is a fact that some extent of disability remains after such a surgical procedure, considering the above definition of disability.

Practical Examples of Job Adjustments for Shoulder Injuries in the Context of Occupational Rehabilitation

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Keywords: adjustment, workplace, accessories

Expert cooperation: ZPIZ and the Fund for employing disabled persons

Background/issue/problem: Preserving work for employed disabled persons at the same workplace with adapted accessories for work.Univer

Abstract: The sheltered workshop "Invalidsko podjetje Pošte Slovenije, proizvodnja in storitve, d. o. o." is a subsidiary of the Post of Slovenia, which was established on 16 April 2015 with the purpose of retaining employment and social security of workers.

Our efforts are directed in adjusting areas and work equipment to preserve the employment of disabled persons with adequate technical accessories.

Vocational rehabilitation is seeking solutions to preserve employment or provide job security for the worker based on their remaining work ability. Focus is mainly on adjusted operating tools and accessories which facilitate the work of disabled persons, due to which they may continue working based on their remaining work ability without impairing their health status and disability.

The general problem that we have seen is that employers, as well as insured persons and other institutions, do not know what vocational rehabilitation is and what options they have.

By adjusting the work areas and purchasing various operating tools and accessories, we improve the worker's working conditions, which leads to a successful performance of work, reduces sick leaves and increases the satisfaction of the employee. In adjusting the work areas and purchasing adequate technical accessories, we work together with the professionals from ZPIZ and authorised vocational rehabilitation concessionaries. Together, we seek solutions and strive to reach consensus, with which the worker may continue carrying out the same job, which we adjust based on their restrictions and the remaining work ability.

We have prepared a presentation which shows that, together with workers from ZPIZ and the rehabilitation centre CRI Celje, we managed to acquire assets to adjust work areas with operating tools.

We at IPPS try to have the same approach and treatment at all ZPIZ units and other state institutions, especially because our employees work across the entire country.

Results: Preservation of jobs of employed disabled persons and employee satisfaction
Conclusion/findings: Employed disabled persons remain active on the labour market, which has great influence on their personal growth, satisfaction, etc.

Challenges in Patellofemoral Instability and Patellofemoral Pain

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Keywords: patellar instability, knee, patellofemoral pain

Recurrent patellar instability and patellofemoral pain are a common pathology in young and active and sport's active population. Knowledge in patellofemoral anatomy and biomechanics is mandatory for appropriate treatment. Following the patient's history evaluation, clinical and radiological examinations (X-Ray, magnetic resonance imaging and torsional profile measurements) are performed, the correct diagnosis is established, and the right treatment is recommended.

Patellar luxation may be the result of a direct blow to the patella or twisted knee injury. The medial patellofemoral ligament (MPFL) is the most important soft tissue stabiliser of the patella and is always damaged when the patella dislocates laterally. Recurrent patellar instability is correlated to anatomical pathologies of the patellofemoral joint: high patella, trochlear grove dysplasia, increased patellar tilt, increased trochlear groove - tibial tuberosity (TT – TG) distance, increased knee valgus and increased femoral anteversion. Surgical treatment is indicated when conservative treatment fails. The literature includes more than 100 different surgical options for treating recurrent patellar instability. The MPFL reconstruction has been shown to be the most successful surgical treatment option. Other surgical procedures are performed for higher degrees of trochlear dysplasia (tibial tuberosity transposition or trochleoplasty). In torsional or angular deformities are present, the femoral or tibial corrective osteotomies are indicated.

Patellofemoral pain is the result of overloading the patellofemoral joint in sports activities, incorrect sports technique or muscular imbalance. The anatomical pathology of the patellofemoral joint is also correlated with patellofemoral pain. Here, the patella is not centred in the trochlear groove and the patellofemoral joint is loaded abnormally. The pain is the result of the incorrect distribution of pressure on the cartilage of the patellofemoral joint. Physiotherapy and changes in physical activity are usually indicated. In rare cases, the patellofemoral parameters are surgically corrected.

Are Preservation Procedures in Knee Arthritis Sensible and When?

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Keywords: arthroscopy, nanofractures, subchondroplasty, meniscus tear pattern, ligament reconstruction

Several tissues may be damaged in the scope of a knee arthritis or injury: cartilage, subchondral bone, knee ligaments and meniscuses.

A cartilage is a tissue with very limited post-traumatic healing properties. Its healing depends on the thickness and surface of the damaged cartilage. There are various surgical options: joint lavage debridement, microfractures/nanofractures, abrasion arthroplasty, osteochondral autograft transplantation (mosaicplasty) and implantations of autograft chondrocytes. Surgeries with implants from special biomaterials have been on the increase in recent years, which allow for an "in situ" regeneration of the cartilage tissue and the subchondral bone.

Usage of crutches for 6-8 weeks is required after microfractures/nanofractures, and full sporting activities may be resumed only after 2-3 months. In artificial membrane implants, full strain may be applied to walking after two months and sporting activities may be resumed several months after the procedure. The exact rehabilitation protocol depends on the injured area and type of procedure.

In cases where the subchondral bone is especially impaired, called bone marrow edema or bone marrow lesion (BML), this may only be healed with the procedure termed subchondroplasty. 2-4 weeks of disburdening is recommended after subchondroplasty, followed by an intensive rehabilitation.

The treatment of ligament issues depends on the patient's problems and the general state of the joint. When patients speak of an instable knee joint that is not too "worn out", we offer the knee ligament reconstruction option. The transplant matures in the ligamentization process at least 9 months, thus full burden is allowed only after the said period.

Due to the important role of meniscuses in the stabilisation, kinematics, and especially absorption of axial burdens in the knee joint, much attention has been given to their reconstruction in recent years. Whether a meniscus is suitable for reconstruction depends mainly on the type and location of the crack, the state of the meniscus' tissue and the patient's expectations. A strict therapy plan follows the reconstruction process, with limited movements and burdens, mainly contractions. Full knee burden and movement is recommended prior to the expiry of six months following the procedure.

Outcomes in Difficult Knee Pathology and Revision Surgery

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Keywords: knee arthroplasty, revision operations, bone tumors

Professional cooperation: Orthopaedic surgery
Background: Medical conditions like bone tumors, severe injuries, infections, premature cartilage degeneration, aseptic necrosis and autoimmune diseases may result in the need for complex knee reconstruction or revision knee arthroplasty of young or middle-aged patients while they are still in their active working stage of life. The aim of this presentation is to present mechanical factors and working loads that predispose them to early endoprosthesis loosening, the course of surgical treatment, rehabilitation, duration of treatment and realistic expectations of the final clinical outcome and their ability to work

Methods: Overview of biomechanical explanations and theoretical guidelines shall be supplemented with presentation of specific clinical cases where treatment was particularly difficult and often unsuccessful. The emphasis shall be put on indications/contraindications for surgery, expected length of rehabilitation, residual functional deficit and the expected work capacity of such patients after completion of treatment.

Results: Medical and biomechanical factors affecting the final outcome of complex knee arthroplasty include the age of the patient, the location and size of the bone defect, the quality of soft tissues around the knee and the residual muscle strength. The motivation of patients to return to their previous work may also heavily depend on psychological and social factors like financial motivation, employment status, adjustment of their employer and working conditions to their disability, the impact of working loads on further progression of their disability.

Conclusions: Functional outcomes of complex knee reconstruction or knee revision patients depend on medical, biomechanical and social factors. Objective assessment parameters include quadriceps muscle strength, active/passive range of motion, stiffness, pain and patient-reported subjective scores (e.g. KOOS, WOMAC). Treatment of difficult clinical cases may often be completed only after one year of rehabilitation or even more. In the long term, the functional status, pain and risk of loosening gradually worsen with time in all arthroplasty patients.

Practical Examples of Job Adaptations for Persons with Hip and Lumbar and Back Injuries

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Keywords: vocational rehabilitation, work ability, workplace adaptation

Vocational rehabilitation in the form of an adaptation of the work place for persons with reduced work ability is the most appropriate form of vocational rehabilitation as it can be implemented the quickest and is also the quickest way for the person to reintegrate themselves into the work process. The presented case of vocational rehabilitation shows an adjustment of the existing job "operative head for machine installations", performed by a person who was given permanent restrictions to their work capacity – able to perform work by shifting between sitting and standing positions, by walking short distances only, by lifting no more than 5kg of weight, without climbing or working on ladders, the person may move in the lumbar and back region only within the ergonomic angles. The person may only occasionally bend in the sustained posture of the lumbar and back region. The reason behind the above restrictions was the functional impairment of the lumbar and back region and left hip. The restrictions were successfully exchanged for the adjustment of the person's workplace with a "movable lift device", which allows the person to continue performing the same job and to quickly reintegrate themselves into the working environment immediately after a successful rehabilitation.

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