

## **Fizioterapija pacienta z nepopolno okvaro vratnega dela hrbtenjače z bolečo ramo – poročilo o primeru**

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**Uvod:** Boleča rama je pri pacientih z okvaro hrbtenjače pogost sekundarni zaplet, ki s svojim vplivom na premičnost, funkcijsko neodvisnost, zdravje in kakovost življenja določa potek, čas in izid rehabilitacije. Razvije se v akutnem stanju po poškodbi, med rehabilitacijo ali nekaj let pozneje, pogosteje pri pacientih s tetraplegijo kot pacientih s paraplegijo (1). Za uspešno obravnavo boleče rame sta nujna interdisciplinarni pristop in poznavanje značilnosti okvare hrbtenjače, dejavnikov tveganja in prognoze. V poročilu je prikazana kompleksna obravnava boleče rame pri pacientu z okvaro hrbtenjače s pristopom manualne terapije. **Metode:** Vključen je bil 71-letni pacient, dva meseca po poškodbi vratnega dela hrbtenice, s posledično tetraparezo in bolečo ramo. Oceno stanja pacienta smo opravili pred začetkom in po petih mesecih rehabilitacije, na podlagi petstopenjske lestvice prizadetosti Ameriškega združenja za paciente po poškodbi hrbtenjače (2), manualnega mišičnega testa, merjenja obsega pasivne gibljivosti zgornjih in spodnjih udov, ocene bolečine z vizualno analogno lestvico, ocene mišičnega tonusa z Ashworthovo lestvico, Bergove lestvice za oceno ravnotežja, lestvice funkcijske neodvisnosti, lestvice neodvisnosti za paciente z okvaro hrbtenjače (3), indeksa hoje za paciente po poškodbi hrbtenjače (4), testa hoje na deset metrov in šestminutnega testa hoje. V fizioterapijo je bil pacient vključen povprečno dve uri na dan in je vključevala sklepno mobilizacijo, mišično energetske manualne tehnike, mobilizacijo živčevja, vadbo trebušnega dihanja, vaje za intersegmentalno stabilizacijo vratne, prsne in ledvene hrbtenice, vaje za stabilizacijo ramenskega sklepa/obroča, kolčnega sklepa, medenice in ledvenega dela, raztezanje mehkih tkiv, funkcijske aktivnosti na blazinah, funkcionalno električno stimulacijo mišic abduktorjev ramenskega sklepa ter ekstenzorjev zapestja in prstov, stoječ položaj ter hojo s pripomočki. **Rezultati:** Po petih mesecih fizioterapevtske obravnave lestvica prizadetosti (stopnja C) ostaja enaka glede na stanje ob sprejemu. Izboljšali sta se mišična moč in pasivna gibljivost vseh sklepov zgornjih in spodnjih udov. Zmanjšala se je bolečina ramenskega sklepa v mirovanju, med gibanjem in ležanjem na boku in trebuhu. Tonus mišic notranjih rotatorjev in mišic adduktorjev ramenskega sklepa, mišic fleksorjev in pronatorjev komolčnega sklepa, mišic fleksorjev zapestja in prstov obeh zgornjih udov se je iz 4 pred rehabilitacijo obojestransko zmanjšal na 3 za desni ud in na 2 za levi ud. Tonus mišic adduktorjev kolčnega sklepa, mišic ekstenzorjev in fleksorjev kolenskega sklepa ter mišic plantarnih fleksorjev stopala se je iz 3 pred rehabilitacijo obojestransko zmanjšal na 2. Vsi funkcijski testi, ravnotežje in hoja so se po petih mesecih fizioterapevtske obravnave izboljšali. **Zaključki:** Glede na izid fizioterapevtske obravnave sklepamo, da tehnike manualne terapije v kombinaciji s funkcijskimi aktivnostmi in nameščanjem pacienta v ustrezne položaje vplivajo na zmanjšanje bolečine v rami pri pacientih z okvaro vratnega dela hrbtenjače. Fizioterapevti se moramo zavedati, da je pri pacientih s tako hudo okvaro in dejavniki tveganja za bolečo ramo nujen interdisciplinarni pristop.

**Ključne besede:** poškodba hrbtenjače, boleča rama, rehabilitacija.

## Physiotherapy of a patient with incomplete spinal cord injury and shoulder pain – a case report

**Background:** Many patients with incomplete spinal cord injury suffer from shoulder pain - a common secondary complication that influences patient's mobility, functional independence, health, quality of life and determines the duration and outcome of rehabilitation. Shoulder pain occurs either in acute phase after injury, during rehabilitation or few years later, more commonly in patients with tetraplegia than in patients with paraplegia. In order to treat shoulder pain, interdisciplinary approach is recommended and physiotherapist should be familiar with spinal cord injury characteristics, and understand the risk factors and prognosis. The present report shows an example of a complex shoulder pain treatment with use of manual therapy in a patient with spinal cord injury. **Methods:** The included patient was 71 years old, two months after cervical spine injury which resulted in tetra paresis and shoulder pain. The assessment was performed prior to the treatment and after five months of rehabilitation. It included American spinal injury association impairment scale, manual muscle test, measurement of passive range of motion for upper and lower limbs, shoulder pain assessment with Visual analog scale, muscle tone assessment with Ashworth scale, Berg balance scale, Functional independence measure, Spinal cord independence measure, Walking index for spinal cord injury, 10-meter walk test and 6-minute walk test. The patient was involved in physiotherapy 2 hours per day (average), 5 days a week, 5 months. The following procedures were used: joint mobilization; muscle energy techniques; mobilization of the nervous system; exercises for abdominal breathing; exercises for intersegmental stabilization of the cervical, thoracic and lumbar spine; exercises to stabilize the shoulder joint/girdle, hip joint, pelvis and lumbar spine; stretching of soft tissue; functional activities on matt-activities; functional electrical stimulation of abductor muscles of the shoulder and extensor muscles of the wrist and fingers; standing position and walking with aids. **Results:** After five months of physiotherapy the Impairment Scale (level C) remained at the same level as prior the study. Muscular strength and passive range of motion of the joints of the upper and lower limbs improved. The shoulder pain decreased during rest, in side-lying or in prone position as well as during movement. Muscle tone of internal rotators and adductor muscles of the shoulder joint, flexor and pronator muscles of the elbow, flexor muscles of the wrist and fingers, in both upper limbs decreased from stage 4 (prior the study) to stage 3 - in the right and to stage 2 - in the left upper limb. Muscle tone of the hip adductor muscles, knee extensor and flexor muscles, plantar flexor muscles of the foot decreased from stage 3 (before the rehabilitation) to stage 2 - both in the right and left lower limb. All the functional tests, balance and walking improved after five months of physiotherapy. **Conclusions:** Based on the results achieved using intensive physiotherapy we might suggest that the manual therapy techniques in combination with functional activities and appropriate patient positioning have an impact to reduce shoulder pain in patients with cervical spinal cord injury. Physiotherapists need to be aware that in patients with severe impairment and risk factors for shoulder pain, interdisciplinary approach is required. **Keywords:** spinal cord injury, shoulder pain, rehabilitation.

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