QUALITY OF TECHNICAL DOCUMENTATION -IS IT IMPORTANT?

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Abstract

The aim of the study was to determine the factors influencing the design and orthotic components of KAFOs, but due to insufficient data the second aim was to assess the quality of technical documentation. Medical and technical records of the subjects who had received a KAFO in 2007 were examined and basic clinical and technical data were recorded. Exactly one half of all the medical prescriptions included the desired function of orthosis, while the others mentioned only the expected functional level of the patient. 71.1% of technical documentation included a description of the used knee joint, 57.9% a description of the ankle joints and 5.3% the design of the thigh brim. It may be concluded that the quality of our medical records and technical documentation for KAFOs has to be improved.

INTRODUCTION

In Slovenia, as is probably the case in most of the Central Europe, orthosis are prescribed by physicians. Physicians may specialize in various fields. The physician prescribing orthosis has to have a clear idea of the current treatment and the potentials and limitations of devices prescribed (1). In Slovenia, physicians prescribe which part of the body the orthosis is for and its desired function. In some cases, as for example in knee-ankle-foot orthosis (KAFO), that usually includes the prescription of materials.

KAFOs are used for patients with functional disorders that affect both the knee and the ankle. Usually they are used in polio survivors, subjects after spinal cord injury and consecutive paraplegia, spina bifida and trauma (2).

KAFOs may have different ankle and knee joints, be made from different materials, different ways may be used to apply posteriorly directed force at the knee joint and the tight part may have a quadrilateral brim or be without it (3). They may have a rigid ankle, limited range of motion or springs to help weak muscles. The knee joint can be free, offset or have various locks (cam lock, drop lock, lever lock).

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METHODS AND SUBJECTS

Methods

Medical and technical records of the subjects who had received a KAFO in 2007 were examined and basic clinical and technical data were recorded.

Subjects

All the subjects receiving a KAFO in 2007 were included into study.

RESULTS

Thirty-eight subjects, 23 men and 15 women, received KAFO in 2007. They were from 6 to 81 year old (46 on average). Fifteen were polio survivors, fourteen had spinal cord injury (SCI), three had pseudoarthrosis or delayed healing of femoral fracture, two arthrogryposis and one stroke, CP and spina bifida.

Exactly one half of all the medical prescription included the desired function of orthosis, while the others mentioned only the expected functional level of the patient. Sixteen patients received orthosis for mild, 21 for moderate and one for severe mobility limitations. In 57.9% of the medical records there was an indication of muscle strength, 50% included an exact description of the range of motion in joints of lower limbs and 44.7% described the limb length.

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The patients who walked without additional walking aids had orthosis for mild mobility limitations, those who walked with 2 crutches mainly for moderate mobility limitations. All the orthosis for mild mobility limitations had a quadrilateral brim, 13 out of 15 had a free knee joint and 10 out of 15 a free ankle joint. Almost all the free knee and ankle joints were prescribed for polio survivors.

DISCUSSION

The study found that the quality of our medical records and technical documentation has to be improved. Only one half of the medical records contained all the information necessary for the orthotist to decide about the design of orthosis and the most appropriate components. Technical documentation also lacked much important information. No data on the design or used components was found in all of the technical notes. The quality of both types of documentation depended also on the person who filled it in. There were some who included all the necessary information in almost all the records, whereas others never wrote any important information. That does not necessarily mean that the examination was incomplete, but negative findings are often not recorded. Later, when the records are reviewed it is not clear whether something was not examined or the findings were negative.

Two types of medical records were used in the study; records from outpatient clinics and records for the admitted patients. For the admitted patients, much of the important information is contained in the files of physiotherapists or occupational therapists; however, those are not always brought to the orthotist when patients come for casting.

Greater attention has to be paid to the fact that successful orthotic prescription requires a detailed analysis of a patient's physical and functional status, followed by careful consideration of their requirements (3) and that all findings have to be recorded and accessible to the whole team.

In the patients with recorded data, the study found that the design and the components of the KAFOs mainly depended on the functional status of the patient (muscle strength, range of motion, abbreviation) and the expected functional level, while the diagnosis itself was not a very important factor.

CONCLUSION

It may be concluded that the quality of our medical records and technical documentation for KAFOs has to be improved.

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