37 - FUNCTIONAL EVALUATION OF PATIENTS WITH TRANSFEMORAL AMPUTATION PROSTHESES

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INTRODUCTION

According to Carvalho (2003), amputation is considered traumatic or surgical removal of a limb. This is one of the oldest and has long been the only surgical alternative, is still feared by patients, but has been seen as a fresh start, a way to eliminate the pain and ensure quality of life. Thus, amputation is now defined as a reconstruction surgery (BOCOLINI, 2000). According Blhomke (1993), the level of amputation is an important factor that directly influences the rehabilitation of the amputee and therefore require a careful evaluation by the medical staff for choosing this level.

According to Carvalho (1998), there are several types of lower limb amputation, and amputation interphalangeal, metatarsophalangeal to the transmetatarsal, Lisfranc, Chopart, Pirogoff, transtibial, transfemoral, knee disarticulation and hip disarticulation. Carvalho (2003), says that the transfemoral amputation, disarticulation is performed between the knee and hip.

According to Smith (2004), the patient who presents transfemoral amputation, faces several challenges, such as the requirements to increase energy, problems with balance and stability.

Regarding the prosthesis and the components indicated for transfemoral amputation, Carvalho (2003) says that the prosthesis can be divided into exoskeletal or having conventional wood material, plastic, or foam and having walls which provide support and aesthetic finishing, and endoesqueléticas or modulators that have a greater strength, durability and low maintenance and can be used for all types of amputations, being less aesthetically pleasing where the connection is made by means of tubes and modular components and finish cosmetics and foam half. According Marzo (2006), the dentures are composed of: fittings, joint and feet. According to Carvalho (2003) for fitting quadrilateral and cat-cam. Already Marzo (2006) emphasizes that the types of knee can be: free, with friction, with manual lock, auto brake, polycentric, controlled by hydraulic pistons, pneumatic and microprocessor controlled. The author still ranks above the prosthetic foot in: not articulated, articulate, multiaxial and dynamic response. Lianza (2007) states that the function of lower limb prostheses is satisfactory when it has adequate support for the body weight and gait depends on the level of amputation of the components used and the alignment of the prosthesis during cooking and training, and thus can the march back to normal.

In relation to functional capacity, Diogo (1997) and Bocolini (2000) say that the vision of society changes when a person with a disability has a good level of independence in performing their daily activities, because it will be showing its full potential to exert activities productively on society, leaving aside the view represents a social and financial burden. Thus, it is easy to understand the psychological reactions and behavior of these individuals, as well as having to accept his new condition of life, has to deal with the acceptance of society. Thus Rebellato Jr. (2004) emphasizes that functional capacity is the autonomy of the person to perform tasks that are part of day - day thus ensuring the possibility of this living alone in her home. So, it is essential to evaluate the different levels of disability of an individual to become a key objective for the proper planning of health care (F. Araújo et al. SD).

Gagnon et al. (SD) states that studies have shown that patients who use dentures can develop normal motor skills to accomplish their activity of daily living independently, even after some years of prosthetic training. Therefore, the assessment of functional abilities is paramount, especially for use of equipment in the medium and long term, and more specifically after rehabilitation. Thus P Calmels, et al. (sd), emphasizes that the evaluation should include an analysis of the quality of daily life activities, and the satisfaction felt by the patient with the use of the prosthesis. So, despite the increasing prevalence of amputations and function through the acquisition of prosthetic rehabilitation, little is known about patients' satisfaction with the use of prostheses (Pezzin LE, et al. SD). Thus, the selection of an appropriate protocol to investigate the effects of the rehabilitation program in order to determine whether the objectives of the proposed treatments were achieved, functional assessment is needed (KAGEYAMA et al., 2008). In order to assess the functionality of these individuals, was developed in Scotland in the questionnaire "Functional Measure for Amputees" (FMA) (KAGEYAMA, 2007).

METHODOLOGY

A quantitative study of cross section of primary source that examined the functional independence in patients unilateral transfemoral amputees at prothetizades through the questionnaire functional measure for amputees (FMA), in order to evaluate the components of the prosthesis and check the difference prosthetic knee for young and polycentric prosthetic knee monoeixo with lock for the elderly, associated with the same functional independence, mobility, use of prosthesis and identify factors that may be influencing the results.

The population addressed were unilateral transfemoral amputees level, where he had as inclusion criteria: individuals who were both female as male, aged 19-35 years and 60-78 years and that they were six prostheses months. We excluded subjects with bilateral amputation, they were not the transfemoral level, individuals with difficulty understanding the questionnaire, those who were not in the stipulated age and patients who did not have at least six months of use of the prosthesis. The study was approved by the Ethics and Research FAG No. 020/2013 and the participants or guardians signed the consent form.

The application of the study was conducted at the Institution of Clinical Faculty Gurgacz Assisi, where the study population attended physical therapy appointments. The questionnaire was carried out individually in the room of prostheses and orthoses of Clinical Rehabilitation - FAG for 12 individuals in the period June-July 2013, where the first individual had to sign a Statement of Informed Consent, after it was made an individual assessment where there were questions of authorship researcher that contained personal questions such as: name, age, time of amputation, duration of use of the prosthesis, and were evaluated prosthesis components: plug-in type, type of knee and foot type. Then we applied the questionnaire to measure functional amputees (FMA).

To conduct the study was used only pen and paper.

RESULTS AND DISCUSSION

Statistical analysis was by descriptive statistics. The sample consisted of 12 unilateral transfemoral amputees fitted with hearing aids, being divided into age groups: 19-35 years consisted of 8 people, considered young adults, and 60 to 78 years, with 4 individuals considered elderly.

Through the data obtained in this study, the age of the sample ranged from 19 to 78 years old, with an average of 49.75 years. As for the time of use of the prosthesis ranged from 7 to 276 months, with an average of 66.33 months, and those with less usage time are seniors aged 60-78 years (8, 9 and 10 months). In relation to age and time of use of the prosthesis can perceive that they can influence the degree of independence of the individual, however Cutson and Bongiorni (1996) point out that age is not a determining factor for the fitting and should not be an impediment to the acquisition of the prosthesis, even if the recommendation of prosthetic gait is indicated only for 20-30% of elderly patients with transfemoral amputation. The above authors contradict the results found in this study that shows that the population has a shorter prosthesis is within the age group 60 to 78 years with a time 8-10 months of use from it. Thus Bilodeau et al. (sd) states that the best results with respect to functional adaptation to the prosthesis are acquired by young adults under 60 years. In accordance with it, Masmoud et al. (sd) explains that the performance is better with the prosthesis in patients aged less than 45 years in lower limb amputation. So it's possible check up great controversy in the literature, where most of the authors says that with respect to functionality, young individuals are the ones that best fit, but there are authors who oppose this idea, saying that age does not have regard the degree of functionality. Thus, it could confirm the results found in this study, where individuals are the young people who had longer use of the prosthesis and consequently a higher degree of functional independence in relation to the same.

The components of the prosthesis are also factors that can influence the degree of functional independence of amputees. In this research only the prosthetic knee differed in the studied population where: eight individuals with these young adults had type polycentric prosthetic knee, and four individuals with these seniors, knee prosthetic type monoeixo lockable. In relation to the type of fitting and foot did not differ as to the institution that makes the prosthesis uses a standard model.

According to Carvalho (2003), to indicate to the prosthetic knee amputee, should evaluate functionality, physical ability and also the socioeconomic status of each individual. Taking into account that the elderly individual has greater instability, greater balance, more insecurity and less muscular strength in relation to the individual young person. Regarding the results of the study in question, an indication of the types of knees is done according to all individuals and taking into account the functionality of it.

Assessing an individual's ability to put the prosthesis, eight individuals put the prosthesis alone, one puts himself and with some difficulty and three lay only if you have help from someone else, and these participants are elderly (66, 76 and 78 years) and had less time to use the prosthesis (8, 9 and 10 months). Therefore Freitas et al. (2006), says that with the natural aging process, the performance of individual people will deteriorate gradually. This fact justifies the results found in this study.

On the mobility of the individual within the home, four individuals did not always use the prosthesis and make use of a wheelchair, 2 always uses the prosthesis and uses a walker (60-78 years), 2 individuals use the prosthesis and crutches and uses four individuals the prosthesis unassisted.

The individual's mobility outside the home: 4 subjects performed approximately half of the activities in the wheelchair and half with the prosthesis with the aid, 8 perform almost all activities using the prosthesis, and four did not use aid, three use a crutch, and one uses a walker.

Regarding the average usage time (hours / days) of the prosthesis, which ranged from 4 to 14 hours per day, with an average of 9.91 hours / day. Since 8 individuals use the prosthesis every day of the week and 4 only 4 days and 3 these older individuals, and an individual who is age 19. On the mobility of the individual in and out of the house can be said that the degree of independence in this case is not related to age, however it is related on the average usage time (hours / days) of the prosthesis, in the literature some authors say that young people use longer prosthesis in relation to the elderly, but in relation to the results the individual younger than 19 years is among the least likely to use the prosthesis. This result contradicts when they say that only elderly may have difficulty in the degree of functional independence as related to the average use of the prosthesis, before that Burger et al. (sd), says that 68 to 88% of amputees use their prosthesis more than 7 hours a day to assist with mobility and daily activities. Only a small number of amputees not remain with their dentures most of the day. This explains the results found in this study, where both young and old can no longer use the prosthesis.

When analyzing the Locomotor Capability Index (ICL), the scores ranged from 10 to 42 with an average of 31.16 points. In this regard only two individuals responded that they could walk all they wanted without stopping, and they are young and have the Locomotor Capability Index (ICL) higher (42). Even if the result has shown that two juveniles had higher ICL, can not be considered that age influences the functionality in this case, because the results in young subjects who answered this requirement are the minority. Regarding the prosthesis can say yes that influences the degree of independence of the individual and confirming it Lianza (2007) points out that the function of the lower limb prostheses is satisfactory when the support body weight is made properly, and that operation depends on the level of amputation of the components used and the alignment of the prosthesis during cooking and training, and may return to normal. The author cites above items that are related to the prosthesis, showing that the same is not indicated correctly the individual can influence the functionality of the gear making it unable to travel long distances with the prosthesis.

CONCLUSION

In this research it can be concluded that the prosthetic knee influence on functional independence as it has different indications for the population that is composed of young and old. In relation to age and time of use of the prosthesis (hours / day) concludes that there are determinants for the individual to adopt their functional independence.

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FUNCTIONAL EVALUATION OF PATIENTS WITH TRANSFEMORAL AMPUTATION PROSTHESES

ABSTRACT

Introduction: Amputation is considered traumatic or surgical removal of a limb. The aim of this study was to analyze the level of functional independence in unilateral transfemoral amputees fitted with hearing aids and the factors that influence the region. Methodology: a quantitative cross-sectional primary source that examined the functional independence in patients with unilateral transfemoral amputees at prothetizades through the questionnaire functional measure for amputees (FMA), in order to evaluate the components of the prosthesis and check the difference polycentric prosthetic knee for young and knee prosthetic monoeixo with lock for the elderly, associated with the same functional independence, mobility, use of prosthesis and identify factors that may be influencing the results. Results: After the questionnaire it was found that the responses were less satisfactory individuals aged 60 to 78 years, with shorter prosthesis use this as 8, 9 and 10 months, and these have knee monoeixo lockable. Conclusion: In this study it can be concluded that the prosthetic knee influence on functional independence as it has different indications for the population that is composed of young and old. In relation to age and time of use of the prosthesis (hours / day) concludes that there are determinants for the individual to adopt their functional independence.

KEYWORDS: transfemoral amputees; functional assessment; prosthetic components.

EVALUATION FONCTIONNEL DES PATIENTS PORTEURS DE PROTHÈSES AMPUTATION

RESÚMÉ

Introduction: L'amputation est considéré comme l'élimination traumatique ou chirurgicale d'un membre. Le but de cette étude était d'analyser le niveau d'indépendance fonctionnelle dans les amputés unilatéraux transfémorales équipés de prothèses auditives et les facteurs qui influent sur la région. Méthodologie: une source primaire transversale quantitative qui a examiné l'indépendance fonctionnelle chez les patients atteints amputés transfémorales unilatérales à prothetizades travers de la mesure fonctionnelle de questionnaire pour les amputés (FMA), afin d'évaluer les composants de la prothèse et vérifier la différence polycentrique genou prothétique pour les jeunes et du genou prothétique monoeixo avec serrure pour les personnes âgées, associée avec la même indépendance fonctionnelle, la mobilité, l'utilisation de prothèse et d'identifier les facteurs qui peuvent influer sur les résultats. Résultats: Après le questionnaire, il a été trouvé que les réponses étaient des personnes moins satisfaisants âgés de 60 à 78 ans, avec utilisation de prothèse courte ce que 8, 9 et 10 mois, et ceux-ci ont monoeixo genou verrouillable. Conclusion: Dans cette étude, on peut conclure que l'influence du genou prothétique sur l'indépendance fonctionnelle depuis le même ont des indications pour la population qui est composée de jeunes et les vieux. En ce qui concerne l'âge et le temps d'utilisation de la prothèse (heures / jour) conclut qu'il existe des facteurs déterminants pour l'individu d'adopter leur indépendance fonctionnelle.

MOTS CLÉS: amputés transfémorales, l'évaluation fonctionnelle, composants prothétiques.

EVALUACIÓN FUNCIONAL DE PACIENTES PORTADORES DE PRÓTESIS DE AMPUTACIÓN TRANSFEMORAL

RESUMEN

Introducción: La amputación se considera la eliminación traumática o quirúrgica de una extremidad. El objetivo de este estudio fue analizar el nivel de independencia funcional en amputados transfemoral unilateral equipados con audífonos y los factores que influyen en la región. Metodología: una fuente primaria de la sección transversal cuantitativa que examinó la independencia funcional en pacientes con amputados transfemoral unilaterales en prothetizades a través de la medida funcional cuestionario para los amputados (FMA), con el fin de evaluar los componentes de la prótesis y comprobar la diferencia policéntrico prótesis de rodilla para jóvenes y prótesis de rodilla monoeixo con cerradura para los ancianos, asociado con la misma independencia funcional, movilidad, uso de prótesis e identificar los factores que pueden estar influyendo en los resultados. Resultados: Después de que el cuestionario se encontró que las respuestas fueron menos satisfactorios individuos de 60 a 78 años, con uso de la prótesis más corto esto como 8, 9 y 10 meses, y éstos tienen monoeixo rodilla con cerradura. Conclusión: En este estudio se puede concluir que la influencia de prótesis de rodilla en la independencia funcional, ya que tiene diferentes indicaciones para la población que se compone de pequeños y mayores. En relación con la edad y el tiempo de uso de la prótesis (horas / día) llega a la conclusión de que no son determinantes para el individuo a adoptar su independencia funcional.

PALABRAS CLAVE: amputados transfemoral, evaluación funcional, componentes protésicos.

AVALIAÇÃO FUNCIONAL DE PACIENTES COM AMPUTAÇÃO TRANSFEMORAL PROTETIZADOS

RESUMO

Introdução: A amputação é considerada a retirada cirúrgica ou traumática, de um membro do corpo. O objetivo do presente estudo foi analisar o nível de independência funcional em pacientes amputados transfemorais unilaterais protetizados e os fatores que influenciam na mesma. Metodologia: Estudo do tipo quantitativo de corte transversal de fonte primária que analisou a independência funcional em pacientes amputados a nível transfemoral unilateral protetizados através do questionário medida funcional para amputados (FMA), com o intuito de avaliar os componentes da prótese e verificar a diferença do joelho protético policêntrico para indivíduos jovens e joelho protético monoeixo com trava para indivíduos idosos, associado à independência funcional dos mesmos, mobilidade, uso de prótese e identificar os fatores que podem estar influenciando nos resultados encontrados. Resultados: Após aplicação do questionário verificou-se que as respostas menos satisfatórias foram dos indivíduos idosos de 60 a 78 anos, com menor tempo de uso da prótese este como 8, 9 e 10 meses, sendo que esses apresentam joelho monoeixo com trava. Conclusão: Na presente pesquisa é possível concluir que o joelho protético influencia na independência funcional já que o mesmo tem indicações diferentes para a população estudada que é composta de jovens e idosos. Já em relação a idade e ao tempo de uso da prótese (horas/dia) conclui-se que não são fatores determinantes para que o individuo adote sua independência funcional.

PALAVRAS-CHAVES: amputados transfemorais; avaliação funcional; componentes da prótese.