30 - QUALITY OF LIFE IN ADULTS AFTER ENDOSKELETAL PROSTHESIS

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INTRODUCTION

The prostheses of lower and upper limb have been around since ancient times, possibly from pre - history. From the Renaissance there are examples of sophisticated prostheses, especially aesthetically. The functionality of the prosthesis before the twentieth century has long been limited by the lack of specific material, knowledge of physical therapy essential to a good fitting, and mainly by the rudimentary stage of medicine, such as lack of asepsis and antibiotics, resulting in the deaths of a majority of the candidates by amputation (Carvalho, 1999).

For patients the term amputation is related to terror, loss and mutilation, bringing an implicit analogy with a disability and dependency. In fact, it is important to inform patients that amputations often provide a quality of life for the better without pain and without suffering before this (Carvalho, 1999).

According to Carvalho (2003) prostheses are tools to replace any lost or malformed region of our body. The prostheses can be divided into two groups: exoskeletal prostheses that are made of solid components being wood or foam, which are glued according to the alignment and can be used in any type of amputation and the endoskeletal prostheses that can be used for all amputation levels, except for the partial amputation of foot and ankle, this type of prosthesis is done by the setting of modular components to fit the foot and by screws after static alignment.

For O'Sullivan (1993), the earlier the initiation of rehabilitation, the greater the potential for success and the more delayed the start, there will be a greater chance to develop secondary complications such as joint stiffness, general debilitation and a psychologically depressed state.

The use of a prosthesis after amputation gives a normal body image, helping the individual to develop greater confidence and physical skills and improving the quality of life of the individual (Baraúna et. Al., 2006). Quality of life (QOL) is a multidimensional concept that incorporates social, physical and mental aspects of the individual.

The tools to measure QOL typically include two areas: general reports about health and specific aspects of the effects that a health condition or impairment have on the lifestyle of a particular person. This second aspect would be more sensitive to identify changes after treatment, and valuable in measuring the evaluation process, as well as the comparison of different treatments.

The questionnaire of quality of life SF-36, a generic instrument, has already demonstrated its usefulness in the international literature (Castro, Helmes, Draibe, Canziani, 2003).

As developed by Ware and Sherbourne (1992) and validated for the Portuguese population by Foster (2000). SF - 36 consists of 36 items of self - response and is intended to assess health concepts that represent basic human values relevant to the functionality and well-being of each one (Beverly, L.).

As previously mentioned the SF-36 comprises 36 items assessing 08 dimensions in distributed as follows: 10 (ten) items related to functional ability, 04 (four) items from the physical aspects, 02 (two) items about pain, 06 (six) items related to general health, 04 (four) items on vitality and 02 (two) items in relation to the social, 03 (three) items on the emotional aspects and 05 (five) items related to mental health (Costa & Duarte, 2002).

These eight sub - scales (dimensions) can be grouped into two components (physical and mental health), obtained from factor analysis of principal components. A component of mental health includes mental health, emotional performance, physical function and vitality. The physical component includes physical function, pain and general health (Beverly, L.).

The purpose of this study was to assess the quality of life of patients undergoing lower limb amputation, analyzing the quality of life in pre and post endoskeletal prosthetic aid fitting. Thus, this study aims to evaluate the general profile of the quality of life in prosthetic aid patients at Faculdade Assis Gurgacz-FAG, Cascavel-PR, specifically from the application of the Quality of Life SF-36.

This work is justified by the high incidence of patients with prostheses for limbs. For this reason the research has great relevance to society, because the survey data will be reported as the prosthesis interferes with the quality of life of an individual.

METHODS

This study is a field study of an epidemic characteristic, evaluative, quantitative and cross-sectional. The population was composed of 30 subjects, 5 females and 25 males, average age between 30-70 years. The sample size was determined by reference to Pasquali (2003), which states that samples with numbers greater than 30 individuals are considered large samples. The criterion for inclusion, all patients had to have a lower limb amputation, and may be unilateral or bilateral and may already be using the endoskeletal prosthesis for at least three months, having the permission of the subject to apply the questionnaire by the signing of a consent form and the time available to be engaged in research. All patients interviewed were conducting follow-up or physical therapy at the Rehabilitation Center at Faculdade Assis Gurgacz - FAG in the city of Cascavel - PR.

To determine the level of quality of life of the volunteers the Brazilian Version adaptation of the questionnaire Quality of Life - SF-36 was used, where the results were converted into scores from 8 domains (physical function, limitation, pain, general health, vitality, social, emotional, mental health).

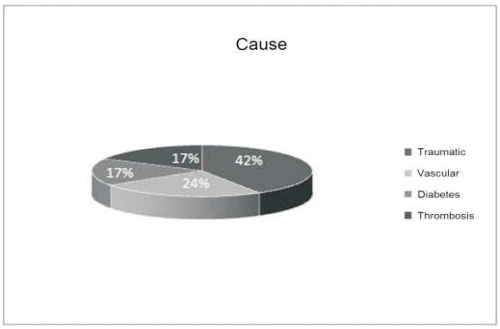
The questionnaires were administered Monday through Thursday in the morning from 09/14/09 to 10/01/09. Data collection was performed by the researcher using the self-administered questionnaire, individually and with easily understood questions. The interviews were conducted after the signing the consent form.

The data collected were tabulated in a statistically descriptive, using SPSS, version 15.0 and discussed in sequence.

RESULTS AND DISCUSSION

Considering the profile of the sample, analysis of the questionnaire adapted from the SF-36 showed that individuals questioned had a mean age of 57.48 years being 31% female and 69% male, 66% had amputation level transfemoral and

traumatic cause was the most prevalent , presenting 42% of the reason for amputation of individuals.



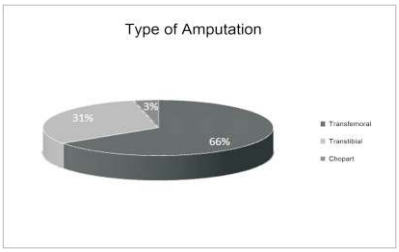
SOURCE: the author, 2009.

Looking at chart 01, which analyzed the causes that resulted in amputation of the patients treated at the Rehabilitation Center of FAG, where it was observed that the cause was a traumatic cause that resulted in more amputations, followed by vascular disease, Diabetes Mellitus and thrombosis. In a study by Cassefo (2003), the prevalence observed for the etiology of amputation was 59.2% for vascular causes, 24% for trauma, 5.3% because of tumors and cancer, 5% for infectious etiology, 3, 1% for congenital malformation and 3.4 for other causes.

However, in our study it may be noted that there was a prevalence of amputation for traumatic etiology, which included automobile accidents, domestic and industrial accidents, making up 42% of the total, followed by vascular causes for 24% and stroke and diabetes mellitus providing 17% each.

To Boccolini (2000) traumatic amputations affect mainly adolescent patients and young adults, who are more exposed to accidents and work accidents by means of transport, the fruits of modern technology.

We can see that when comparing one study to another, the traumatic cause observed by Cassefo (2003) was halved in this study conducted at the Rehabilitation Center of Faculdade Assis Gurgacz - FAG. Cassefo (2003), in his research, includes diabetes mellitus in vascular diseases, which still comparing the results, adding in our study vascular diseases (6%) with diabetes mellitus (21%) will result in 27%, which would still represent less one half of the study mentioned above.



SOURCE: the author, 2009.

By analyzing graph 02 we can observe the levels of amputation for Milk (2004), who conducted studies on patients with lower limb amputation. The same was observed that 76.3% of lower limb amputees were transfemoral amputations and 23.7% transtibial.

Analyzing our results, we can see that the results are compared to results found on the above, once observed that there was a higher incidence in transfemoral amputations (66%) compared to transtibial (31%).

The level of amputation should relate directly to the future use of prosthesis. According to Matiotti & Lianza (1985), the amputation will have even more satisfactory functional results, the lower they are on the limb, resulting in greater limb leverage and minimum change in muscle balance. When a person suffers a lower limb amputation, especially if the level of the amputation is above the knee, your body will adapt to a severe imbalance of muscle mass and strength, in which these changes can cause signs and symptoms in the spine. It is important that there be a reformulation of the internal representation or body scheme, and these people must learn to bear weight on the artificial limb, so that they can reduce the asymmetric and lateral instability (Garcia et. al., 1992).

Control	Pre-Endoskeletal Prosthesis		Post-Endoskeletal Prosthesis		Value of p
	Average	Standard Deviation	Average	Standard Deviation	
Functional Capacity	26,0	12,4	32,5	15,0	0,008089
Limitation	29,2	33,5	60,7	30,5	0,001113
Pain	52,7	25,3	66,4	27,0	1,770933
Health	58,3	19,6	64,7	18,3	0,019467
Vitality	66,4	15,3	74,2	11,7	0,016538
Social Aspects	58,9	26,5	75,8	19,2	0,015463
Emotional Aspects	38,0	36,6	73,7	32,5	0,000324
Mental Health	68,5	17,1	76,6	7,3	0,059849

Table 03 - Comparison between the quality of life in pre and post endoskeletal prosthesis fitting according to the questionnaire on quality of life SF-36.

Looking at the values (p = 0.05), one can see an improvement in quality of life after endoskeletal prosthesis in the areas of physical functioning, limitation, pain, health, vitality, social, emotional, mental health, for the questionnaire SF-36 cited in Table 03.

Studies show that patients who use prostheses can develop normal motor skills to accomplish their ADLs (Activities of Daily Living) independently, even if it is after several years of prosthetic training. Therefore, assessment of functional abilities is paramount, especially for use of equipment in the medium and long term, and more specifically after rehabilitation. Besides the use of the prosthesis and the possibilities of walking, the evaluation should include analysis of the quality of activities of daily

living, independence for the fit and the satisfaction felt by the patient using it. So, despite the increasing prevalence of amputations and acquisition of function by prosthetic rehabilitation, little is known about the patients' satisfaction with the use of prostheses.

However, despite the difficulties and obstacles on the prosthesis, the quality of life of these patients tend to improve gradually, thus causing the individual to integrate into society again, enjoying the best activities of daily living and improving their quality of life.

FINAL

For patients the term amputation is related to terror, loss and mutilation, bringing an implicit analogy with a disability and dependency. In fact, it is important to inform patients that amputations often provide a quality of life for the better without pain and without suffering like they felt before (Carvalho, 1999).

It should therefore not be lamented what was lost, but giving due consideration to what is left. Providing patients and families the necessary guidance and information for a good prognosis for the amputee is important. Looking also for psychological changes, such as pain and phantom pain by misuse of the prosthesis. The prostheses, while devices that substitute in the absence of a limb or part thereof, has as its main objective providing the function of the lost limb or giving aesthetic satisfaction through a complete integration between the prosthesis and patient. The success of a prosthesis depends not only on good prosthetic products, as well as an appropriate treatment .

The comprehensive and integrated treatment of the patient will determine the success of any rehabilitation work scheduled. The ultimate goal is to enable the patient to better use their capabilities so that he can be independent in activities of daily living.

Therefore, it is concluded that according to the study, the results show that the 30 patients with a lower limb prosthesis, when assessed via the SF-36, on the quality of life, can be considered to have a good quality of life.

In general, the patient should undergo treatment with a physiotherapist for rehabilitation of movement (a new way of walking) and learn to use the prosthesis properly. At this stage, the participation of amputee is essential, because if he does not join the program, he can not achieve a functional gait, for example.

Finally it is important to understand the human being in order to work with him, and not for him.

The physical, psychological and social rehabilitation is working with the patient in building a society ever more human and dignified.

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QUALITY OF LIFE IN ADULTS AFTER ENDOSKELETAL PROSTHESIS

ABSTRACT

The term amputation is defined as the removal, usually by surgery, of all or part of a member. The lower-limb amputations are surgical procedures, in which they leave irreversible damage. The prostheses are tools used to replace any lost or malformed region of our body. The use of a prosthesis provides a normal body image, helping the individual to develop greater confidence and physical skills and improving their quality of life. Objective: To determine the quality of life of patients after receiving an endoskeletal prosthesis at Faculdade Assisi Gurgacz-F AG, Cascavel-PR. Methodology: This study is based on the application of SF -36 questionnaire for assessing the quality of life of patients in the pre-and post prosthetic fitting for the lower limbs. The population consisted of 30 subjects, 5 females and 25 males, average age between 30-70 years. As inclusion criteria, all patients had to have a lower limb amputation, and may be unilateral or bilateral and may already be using the endoskeletal prosthesis for at least three months. Results: Using the values (p = 0.05), one can that there has been improvement in quality of life after endoskeletal prosthesis in the areas: physical functioning, limitation, pain, health, vitality, social, emotional, mental health questionnaire adapted for the SF-36. Conclusion: One should not consider amputation as the end of something or simply the loss of a limb that eventually will generate disabilities, but consider it the beginning of a new phase, because if one side was the loss of a segment of life and a change in body image the other eliminated the danger of loss of life and gave relief to intolerable suffering, making it possible for greater freedom of action.

KEYWORDS: Amputation, Quality of life, SF-36

ALITÉ DE VIE CHEZ DES ADULTES APRÉS LA PROTHÉTISATION ENDOSQUELETIQUE.
RÉSUMÉ

Les prothèses sont des outils utilisés pour remplacer quelque région perdue ou malformée de notre corps. L'utilisation d'une prothèse finit en offrant une image corporelle normale, aidant l'individu à développer une plus grande confiance et les compétences physiques et d'améliorer sa qualité de vie. Objectif: Évaluer le profil de la qualité de vie des patients après prothétisation endosqueletique de la Faculté Assis Gurgacz - FAG, Cascavel - PR. Méthodologie: Cette étude est basée sur l'application du Questionnaire SF -36 pour évaluer la qualité de vie des patients avant la prothétisation et après la prothétisation endosqueletique de membres inférieurs. La population a été composée de 30 personnes en étant 5 du sexe féminin et 25 du sexe masculin, avec âge moyen entre 30-70 ans. Quant aux critères d'inclusion, les patients devaient avoir une amputation des membres inférieurs, en pouvant être unilatérale ou bilatérale et ils devaient déjà utiliser la prothèse endosqueletique pendant au minimum trois mois. Résultats: À travers les valeurs (p=0,05), il se peut vérifier qu'il y a eu une amélioration dans la qualité de vie après la prothétisation endosqueletique dans les domaines: capacité fonctionnelle, limitation, douleur, santé, vitalité, aspects sociaux, aspects émotionnels, santé mentale liés au questionnaire adapté SF-36. Conclusion: Nous devons considérer l'amputation non comme la fin de quelque chose ou simplement la perte d'un membre qui conséquentement ira produire des incapacités, mais nous devons la considérer comme le début une nouvelle phase, donc si d'un côté il a y eu la perte d'un segment et la modification de l'image corporelle, de l'autre s'est éliminé le danger de la perte de la vie ou a donné soulagement à des souffrances intolérables, en rendant encore possible de plus grande liberté d'action.

MOTS-CLÉS: Amputation, Qualité de vie, SF-36.

CALIDAD DE VIDA EM ADULTOS DESPUÉS DE PRÓTESIS ENDOESQUELETO
RESUMEN

La amputación se define como la eliminación de la totalidad o parte de un miembro. Las amputaciones de miembros inferiores son los procedimientos quirúrgicos que dejan daños permanentes. Las prótesis son herramientas utilizadas para reemplazar cualquier pérdida o malformación de la región del cuerpo. El uso de una prótesis, ayuda a dar un cuerpo normal, ayudar al individuo a desarrollar una mayor confianza y las habilidades físicas y mejorar la calidad de vida. El objetivo de este estudio fue determinar la calidad de vida de los pacientes después de la prótesis en el centro de Rehabilitación Assis Gurgacz, Cascavel PR. O estudio se basó en el cuestionario SF -36 para evaluar la calidad de vida de los pacientes antes y de prótesis endoesqueleto tras la colocación de prótesis. La población estuvo constituida por 30 sujetos, 5 hembras y 25 varones, de entre 30-70 años. Para la inclusión, todos los pacientes tenían que tener una amputación de miembros inferiores, y puede ser unilateral o bilateral y se utilizó la prótesis endoesqueleto durante al menos tres meses. Los resultados se evaluaron utilizando los valores (p = 0,05), así que usted puede notar una mejora en la calidad de vida después de escuchar las zonas endoesqueleto: funcionamiento físico, la limitación, el dolor, la salud, vitalidad, social, emocional, la salud mentales relacionadas con la SF-36. a través de esto, se concluyó que la amputación no puede considerarse como algo que simplemente la pérdida de un miembro que ha de generar la discapacidad, sino como el inicio de una nueva etapa que requerirá ajustes y la motivación para promover la calidad de vida. El estudio reveló una gran satisfacción de las personas que se unieron a la prótesis endoesqueleto.

PALABRAS CLAVE: Amputación, Calidad de vida, SF-36.

QUALIDADE DE VIDA EM ADULTOS APÓS PROTETIZAÇÃO ENDOESQUELETICA.
RESUMO:

O termo amputação é definido como sendo a retirada, geralmente cirúrgica, total ou parcial de um membro. As amputações de membros inferiores são procedimentos cirúrgicos, nas quais deixam seqüelas irreversíveis. As próteses são utensílios empregados para substituir alguma região perdida ou malformada do nosso organismo. A utilização de uma prótese acaba oferecendo uma imagem corporal normal, ajudando o indivíduo a desenvolver maior confiança e habilidades físicas e melhorando a sua qualidade de vida. Objetivo: Avaliar o perfil da qualidade de vida dos pacientes após protetização endoesquelética da Faculdade Assis Gurgacz –F AG, Cascavel-PR. Metodologia: O presente estudo baseia-se na aplicação do Questionário SF -36 para avaliar a qualidade de vida dos pacientes na pré-protetização e após protetização endoesquelética de membros inferiores. A população foi composta por 30 indivíduos sendo 5 do sexo feminino e 25 do sexo masculino, com idade média entre 30-70 anos. Como critério de inclusão, todos os pacientes tinham que possuir amputação de membros inferiores, podendo ser unilateral ou bilateral e já estar utilizando a prótese endoesquelética por no mínimo três meses. Resultados: Através dos valores (p=0,05), pode-se verificar que houve melhora na qualidade de vida após protetização endoesquelética nos domínios: capacidade funcional, limitação, dor, saúde, vitalidade, aspectos sociais, aspectos emocionais e saúde mental referentes ao questionário adaptado SF-36. Conclusão: Deve-se considerar a amputação não como o fim de alguma coisa ou simplesmente a perda de um membro que conseqüentemente irá gerar incapacidades, mas sim devemos considerá-la como o princípio de uma nova fase, pois se de um lado houve a perda de um segmento e a alteração da imagem corporal, do outro eliminou-se o perigo da perda da vida ou deu alívio a sofrimentos intoleráveis, tornando ainda possível maior liberdade de ação.

PALAVRAS - CHAVE: Amputação, Qualidade de vida, Questionário SF-36.

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