# 45 - PROFILE OF PATIENTS WITH UPPER LIMB AMPUTATION SERVED IN THE CENTER OF REHABILITATION FAG

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## INTRODUCTION

The word originates from the Latin amputation (ambi = around / round putatio = prune / remove) and is considered a withdrawal, surgical or traumatic, a member of the body (CARVALHO, 2003). It is the removal of a body part, which can surgically or by direct trauma occur. Considered one of the oldest procedures, for long, been the only surgical alternative exists, causing fear and synonym of mutilation. Thus, amputation became defined as a reconstruction surgery (BOCOLINI, 2000; GOFFI, 2007). The first surgical amputations were performed brutal manner, and Hippocrates (460-377 BC) the older technique of amputation: utilizava- is to withdraw the cutter members through joints and cauterization was performed with hot oil or iron (ibid).

After World War II, interest in amputation surgery has increased, but only in World War II, when the number of amputees was higher, who have organized research to create the most advanced surgical techniques (Kuhn, 1997; BOCOLINI, 2000 ; CARVALHO, 2003). Therefore, amputation may be the only recourse for a member severely affected by infection, trauma or even at a late stage of ischemia. The immediate goals of amputation are: pain relief, removal of dead or diseased tissue; performing an operation to allow wound healing and the preparation of a provisional prosthetic stump to be used which will permit the achievement of the functional use of the amputated limb. The main reasons for amputation of upper limb traumatic stemming from traffic accidents and accidents at work. In the latter case amputation of fingers, hand and arm (TEIXEIRA, SAURON, SANTOS OLIVEIRA, 2008) occurs. In children the most common cases of amputations are for congenital malformations and tumors in middle-aged adults they occur by direct trauma or accidents and chronic infections in the elderly population has the greatest causes of amputations occur in diabetic gangrene (Teixeira, SAURON, SANTOS OLIVEIRA, 2008). The level of amputation is an important factor that directly influences the rehabilitation of the amputee. Decide the height of the amputation is not simple, a careful evaluation by the medical staff (BLOHMKE, 1993) is required.

Levels of amputation of the upper limbs are divided as follows: Partial hand, amputation of fingers, transmetacarpica amputation; Disarticulation of the wrist: this level of amputation preserve the bones of the radius and ulna in full; Dislocation of the elbow: an amputation is where it removes all part of the elbow joint down completely preserving the humerus; Dislocation of the shoulder: an amputation is where the whole arm is removed from the humerus, radius, ulna, and hand bones; Disarticulation of escapulaumeral: an amputation is where it draws the whole arm including the bones of the scapula and clavicle; Transradial: is an amputation below the elbow, between the wrist joint and the elbow joint; this level can be classified in three different ways with regard to sizes: proximal transradial; medial or distal. transumeral: is an amputation above the elbow, between the elbow joint and the shoulder joint; this level can be classified in three different ways with regard to sizes: proximal transumeral; medial or distal.

To decide the ideal prosthesis, the professional must be aware of certain factors and information during the evaluation (BLOHMKE, 1993; Carvalho, 2003). According to Carvalho (2003), the following must be analyzed: Amputation level: influences on the choice of the socket and prosthetic components; general state of the stump; the presence of neuromas; major ligament instability and deformities; among other complications; Professional activity; (the type of professional activity will help in the choice of the prosthetic components, indicate whether there is need for them to be more secure and resistant). Place of residence or work (the characteristics of the local housing and labor must be analyzed so that we can elect the type of prosthesis. It is the case of humid environments, which require specific components). Economic conditions: (in some circumstances, certain components would be listed as well, but this fitting is not possible due to the economic conditions of the patient). Previous experience with prostheses: some patients using prostheses made with ancient techniques and find it difficult to adapt to newer systems. In many of these situations, it is best to keep the system from previous prosthesis. User collaboration (some prostheses have very sensitive adjustments that completely alter the function with the simple touch system, so it is critical to patient compliance). To that statement is correct, one should take into account that each patient has their quirks, so "not always the best prosthesis for a given patient will be the best for another" (Carvalho, 2003, p. 238).

The types of prostheses are indicated for arms: Mechanical where its operation is activated by muscular propulsion, this type of prosthesis is triggered by the patient's own body (TOCUPACIONAL, 2008). Complementation of body image (psychological aspect, body balance and posture maintenance). Cosmetic prostheses: they do not perform any function, are used only for aesthetic reasons (Azevedo and Fonseca, 2002); Hybrid prosthesis: in this type of prosthesis controls systems combine mechanical strength (mechanical prosthesis) with a myo electric force, resulting in a more functional prosthesis (Azevedo and FONSECA-2002); Myo-electric prosthetic: This type of prosthesis is activated by electrodes placed on the stump that capture muscle contractions, triggering the operation and movement (Azevedo and Fonseca, 2002). Bionic: The function is similar to an electric prosthesis, and the multi-jointed hand, that is, there is an individual articulation of all the fingers.

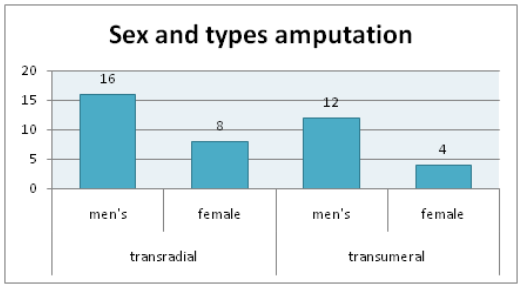
## MATERIALS AND METHODS

The present research it is a field study, epidemiological data collection from secondary sources, quantitative character, where the sample was composed of 38 individuals in collecting data from medical records of patients with a history of upper limb amputation, where was collected causes of upper limb amputation; sex, age; types of amputations that occur more; number of patients who received the prosthesis in the rehabilitation center FAG and does not use or prosthesis; incidence of bilateral upper limb amputation. Of 38 patients, 26 males and 12 females. The inclusion criteria in the study were male and female patients with transumeral and transradial amputation, may be unilateral or bilateral and are using the prosthesis for at least one month, received the CRF-FAG in the city of Cascavel - PR. For analysis of results, preparation of charts and graphs to present the data to Microsoft Excel 2007 software was used.

## RESULTS AND DISCUSSION

This study was conducted with a total of 38 patients, through data obtained from the collection of the records, all patients in the sample had upper limb amputation, and 60% had transradial amputation and 40% transumeral. And the higher incidence of amputation was male, 70% and 30% in females. As shown in figure 1.

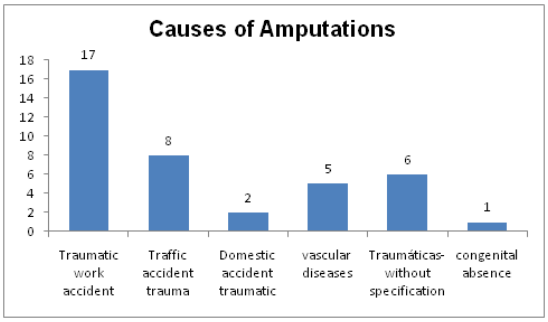
GRAPH 01 - Sex and amputation types of patients seen at the Rehabilitation Centre of FAG.




According to Barbosa, Lima, Barichello (2008) in a survey of a hospital for the clinical Uberaba-MG, found that 47 (59%) patients underwent amputation of the upper limbs were male and 33 (41%) were females, corroborating other research demonstrating the prevalence of this behavior among the males. Also argues that the tendency for women to undergo amputation later, compared to men, perhaps due to the fact that women seek health services more frequently and adhere to preventive backing with greater ease.

The causes that resulted in amputation of the patients treated at the Rehabilitation Center of the FAG, where it was observed that the traumatic cause was one of the main causes that resulted in amputations of which are divided into work accident (accidents with farm machinery accidents were also analyzed with fireworks, electrical and network mutilation) 44%, followed by causes traffic accident; 20%, traumatic unspecified; 15%, vascular diseases; 13%, domestic accidents; 5%, 3% congenital malformation; as shown in the chart below.

GRAPH 02 - Causes of amputation patients seen at the Rehabilitation Center of FAG.




According to REIS, junior and CAMPOS (2012) made in the center of rehabilitation and upgrading DR. Henry Santillo where the sample was amputated due to the incidence of the etiology was observed as follows: Vascular 36.2%; 17.24% motorcycle accidents; 8.62% of car accidents; Trampling 6.90%, 6.03% accident with weapon; 5.19% industrial accident and 19.82% others who were included (rocket accident, wounds, tumors, ETC). However, in a study by BARBOSA, LIMA, Barichello (2008) found in a survey of a hospital for the clinical Uberaba-MG between the 10 (12.5%) of upper limb amputations 8 (80%) had traumatic etiology and only two (20%) non-traumatic etiology. Since Afonso, RABBIT, CADET, ET. AL on a survey conducted in Portugal showed that the etiology of amputation was 64% of congenital origin and 36% adiquiridas (33% of traumatic causes and 3% of infectious causes). The etiology of traumatic amputations was 31% rocket explosion, accidents with 21% machine and 14% road accidents and electrocution. In another study BUENO and Rosario in a survey conducted at the State University of Santa Catarina - UDESC, Florianópolis / SC found that the causes leading to limb amputation were 90% of traumatic origin, ie, nine of the ten interviewees had their upper limb amputated due to a direct hit on the spot, as injuries by slashing weapon, firecracker, crushing member presses and limb amputation in the operation of farm machinery. Only one individual, representing 10% of the sample had congenital factor as a cause of limb amputation.

Data collection from medical records, only 2 (5%) patients had bilateral amputation, and 1 bilateral and 1 transumeral transumeral and transradial, and 95% do not. Both are males and the cause is traumatic amputation, one patient did not have specification as the accident was not known, and the other which was in power grid. Luccia, PINTO, YMAOKA ET. AL on work performed at the Center for Preservation and Adaptation Members of Sao Paulo. A presentation of two amputees bilaterally at the level of the forearm being the cause of bilateral amputation were burns of both upper limbs caused by electric shock, accident and myo-electric cylinder was performed.

Of the 38 medical records contained only 2 (5%) patients did not receive implants, and 36 (95%) received 50% of patients have adapted and make use of the prosthesis, and 45% do not use because they have not adapted and 5 % was not informed about the use and adaptation in medical records evaluated. Already Afonso, RABBIT, CADET, ET. AL on his research conducted in Portugal, showed that the population was assessed using the prosthesis and found that about 50% rarely wore a prosthesis, 32% and 15% always wore wore activities. According BUENO and Rosario in a survey conducted at the State University of Santa Catarina - UDESC, Florianópolis / SC. When the factor related functional rejection and the level of amputation, found that 50% of the interviewees do not use prosthetic fitting because they think would be of little use; Another important factor, considered as a cause of not fitting was the time it took an individual to adapt without the prosthesis. The main problems of upper limb prostheses currently available are generally: high weight, high cost, lack of functionality and aesthetically fall short in many cases.

To decide the ideal prosthesis, the professional must be aware of certain factors and information during the evaluation, the following must be analyzed: level of amputation, general condition of the stump, economic, housing and the workplace. In CRF were given only two types of prosthesis in this study 90% were functional prosthesis being transradial amputees 55% and 35% and 5% transumeral aesthetics and all transradial and only 5% did not receive any type of prosthesis at center.

**CONCLUSION**

We conclude from this study that males have a higher incidence of upper limb amputation, and amputation in 28 male and 12 female gender, agreeing to literature; predominated in the etiology of traumatic amputation cause in accordance with articles compared. In the survey showed higher incidence in transradial amputation, 24 patients and 16 tansradial transumeral are amputees. As the prosthesis, the medical records evaluated, 95% of patients received a prosthesis, 50% of these have adapted and make continuous use in their daily lives. It was intended with this study to investigate the profile of amputees CRF-FAG, further research is needed on the topic discussed.

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**PROFILE OF PATIENTS WITH UPPER LIMB AMPUTATION SERVED IN THE CENTER OF REHABILITATION FAG**

**ABSTRACT**

Introduction: The word originates from the Latin amputation (ambi = around / round putatio = prune/ remove) and is considered a withdrawal, surgical or traumatic, a member of the body. The main reasons for upper limb amputations are traumatic stemming from traffic accidents and accidents at work. The level of amputation is an important factor that directly influences the rehabilitation of the amputee. The primary objective of this study was to identify the main causes of upper limb amputations in patients FAG's Rehabilitation Center. Methodology: This is a field study, epidemiological data collection from medical records for quantitative character, composed of 38 individuals, 28 males and 12 females, consultation of medical records of the patients were in the month of CRF July and August 2014. results: Relation to type of amputation is 60% and 40% transradial amputation transumeral. And the higher incidence of amputation was male, and 70% in males and 30% females, we found that the cause was traumatic causes more amputations resulted in being 44% of accidents at work, road traffic accident 20 %, 15% unspecified traumatic, vascular diseases 13%, 5% household accidents, congenital malformation 3%. Only 2 (5%) patients had bilateral amputation, and 95% do not. Records of assessed only 2 (5%) patients received no implant, and 36 (95%) received, and 50% of patients have adapted and make use of the prosthesis, and 45% do not use because they were not adapted and 5%. Conclusion: From this study, it was possible to identify the main characteristics of amputees CRF- FAG.

**KEYWORDS:** upper limb amputations; Causes, Prosthesis .

**PROFIL DES PATIENTS AVEC UPPER AMPUTATION D'UN MEMBRE SERVI DANS LE CENTRE DE REHABILITATION FAG**

**RÉSUMÉ**

Introduction: Le mot provient du latin amputation (ambi = autour / putatio tour = prune / supprimer) et est considéré comme un retrait, chirurgical ou traumatique, un membre du corps. Les principales raisons de l'amputation d'un membre supérieur sont traumatiques découlant d'accidents et d'accidents trafic au travail. Le niveau de l'amputation est un facteur important qui influe directement sur la réhabilitation de l'amputé. L'objectif principal de cette étude était d'identifier les principales causes de l'amputation des membres supérieurs chez les patients du CRF. Méthodologie: Cette étude de terrain, la collecte de données épidémiologiques à partir des dossiers médicaux pour caractère quantitatif, composé de 38 personnes, 28 hommes et 12 femmes, la consultation des dossiers médicaux des patients étaient au mois de CRF juillet et août 2014. Résultats: Relation à type d'amputation est de 60% et 40% amputation transradiale transumeral. Et l'incidence plus élevée de l'amputation était de sexe masculin, et 70% chez les hommes et 30% des femmes, nous avons constaté que la cause était les causes traumatiques

plus amputations ont abouti à être 44% des accidents du travail, accident de la circulation route 20 %, 15% non spécifiés traumatiques, les maladies vasculaires de 13%, 5% les accidents domestiques, de malformation congénitale 3%. Seuls 2 (5%) patients avaient une amputation bilatérale, et 95% ne le font pas. Dossiers de seulement 2 (5%) patients évalués ont reçu aucun implant, et 36 (95%) ont reçu, et 50% des patients se sont adaptés et faire usage de la prothèse, et 45% ne pas utiliser parce qu'ils ne sont pas adaptés et de 5%. Conclusion: Dans cette étude, il a été possible d'identifier les principales caractéristiques des amputés FAG CRF-.

**MOTS-CLÉS:** amputations des membres supérieurs; Causes, Prothèse .

**RESUMEN**

Introducción: La palabra origina de la amputación de América (ambi = alrededor / putatio ronda = ciruela / eliminar) y se considera una retirada, quirúrgico o traumático, un miembro del cuerpo. Los principales motivos de las amputaciones de las extremidades superiores son traumática derivada de accidentes de tráfico y accidentes de trabajo. El nivel de la amputación es un factor importante que influye directamente en la rehabilitación del amputado. El objetivo principal de este estudio fue identificar las principales causas de las amputaciones de las extremidades superiores en los pacientes de IRC. Metodología: Se trata de un estudio de campo, recopilación de datos epidemiológicos de los registros médicos de carácter cuantitativo, compuesta de 38 individuos, 28 hombres y 12 mujeres, la consulta de las historias clínicas de los pacientes se encontraba en el mes de CRF julio y agosto de 2014. resultados: Relación con tipo de amputación es del 60% y el 40% transumeral amputación transradial. Y la mayor incidencia de amputación era varón, y el 70% en los varones y de las hembras el 30%, se encontró que la causa era causas traumáticas más amputaciones dieron lugar a ser el 44% de los accidentes de trabajo, accidentes de tráfico por carretera 20 %, 15% no especificadas, enfermedades vasculares traumáticas 13%, 5% accidentes domésticos, malformación congénita 3%. Sólo 2 (5%) pacientes tuvieron una amputación bilateral, y el 95% no lo hacen. Los registros de evaluados sólo 2 (5%) pacientes no recibieron el implante, y 36 (95%) recibieron, y el 50% de los pacientes se han adaptado y hacen uso de la prótesis, y el 45% no utilizan porque no se adaptaron y 5%. Conclusión: A partir de este estudio, fue posible identificar las principales características de los amputados FAG CRF.

**PALABRAS CLAVE:** las amputaciones de las extremidades superiores; Causas, Prótesis.

**PERFIL DOS PACIENTES COM AMPUTAÇÃO DE MEMBRO SUPERIOR ATENDIDOS NO CENTRO DE REABILITAÇÃO FAG**

**RESUMO**

Introdução: A palavra amputação tem origem do latim (ambi= ao redor de/ em volta de putatio= podar/retirar) e é considerada a retirada, cirúrgica ou traumática, de um membro do corpo. Os principais motivos de amputações de membros superiores são de ordem traumática decorrentes de acidentes de trânsito e acidentes de trabalho. O nível de amputação é um fator importante que influência diretamente na reabilitação do indivíduo amputado. O objetivo primário do presente estudo foi identificar as principais causas de amputações de membros superiores nos pacientes do CRF. Metodologia: trata-se de um estudo de campo, epidemiológico, de coleta de dados de prontuários, de caráter quantitativo, composta por 38 indivíduos, sendo 28 do sexo masculino e 12 femininos, a consulta de prontuários dos pacientes no CRF foram no mês de julho e agosto de 2014. Resultados: Relação ao tipo de amputação é de 60% amputação transradial e 40% transumeral. E a maior incidência de amputação foi no sexo masculino, sendo 70% no sexo masculino e 30% no sexo feminino, observou-se que a causa traumática foi a causas que mais resultou em amputações sendo acidente de trabalho 44%, acidente de trânsito 20%, traumática sem especificação 15%, doenças vasculares 13%, acidentes domésticos 5%, má formação congênita 3%. Apenas 2 (5%) pacientes apresentaram amputação bilateral, e 95% não apresentam. Dos prontuários avaliados apenas 2 (5%) pacientes não receberam prótese, e 36 (95%) receberam, sendo que 50% dos pacientes se adaptaram e fazem o uso da prótese, e 45 % não fazem o uso por não terem se adaptado e 5%. Conclusão: a partir desse estudo, foi possível identificar as principais características dos amputados do CRF- FAG.

**PALAVRAS CHAVE:** Amputações de membro superior; Causas, Prótese.