

USE OF PROSTHESIS AND RETURN TO WORK BY AMPUTEES INVOLVED IN TRAFFIC ACCIDENTS

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ABSTRACT

Objective: To detect the use of a prosthetic leg and the return to work in amputees by traffic accidents (TA). **Method:** A case series by means of an interview with AT amputees who were registered between December 2002 and December 2004, after discharge from rehabilitation at the AACD/MG. The sample consisted of 26 amputees, 22 men and four women, mean age of 37.7 years. Fifteen amputations were above the knee and 11 below the knee. Eighteen (69.2%) people had completed elementary education. **Results:** All amputees received prostheses and 16 (61.5%) of them reported using it for walking. All subjects

remained off work after the accident, and 16 (66.7%) remained off work by utilizing the Social Security, six (25%) retired due to disability and two (8.3%) retired due to age. Five of the people away by Social Security returned to work and three retired due to disability and age declared that they are active to supplement their retirement income. **Conclusion:** The use of prosthesis is generally for walking and the rate of return to work after rehabilitation is low. Low level of education and work qualifications may have been responsible for these results.

Keywords: Traffic accidents. Amputation. Lower Limb. Prostheses and implants.

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INTRODUCTION

TAs represent an important percentage of morbimortality all over the world.¹ The individual that survives the accident may evolve with immediate and/or late-onset sequelae. Accident sequelae include amputation of limbs, which can lead to several complications at the amputation stump, such as edema, ulcerations, phantom pain, infections and painful neuroma, diminishing the individual's physical and social independence.^{2,3}

In view of the foregoing, it is necessary to have a rehabilitation program with a multidisciplinary team for these individuals to guarantee good therapeutic evolution.

Rehabilitation is aimed at physically reintegrating the individual, both for him to accept the new state of his body, and due to the use of external equipment, in this case the prosthesis, when necessary.² It is also intended to train the individual for better use of his potentialities and physical and social independence.

During rehabilitation, the productive life of the accident victim is affected as he remains off work during this recuperation process and in a society where the individual is valued for his production and wealth, he is seen as useless.

Some studies have already demonstrated the characteristics and the positive factors in lower limb amputees that are related to return or non-return to work, with or without professional re-adaptation.⁴

In the studies conducted by Pineda et al.⁵ they observed that after rehabilitation, traumatic amputation youths exhibited better physical and psychic conditions, and a higher rate of return to professional activities. And they affirmed that the better the physical and psychic independence the greater the chance of attaining professional autonomy. Shoppen et al.⁴ add that the comfort of the prosthesis prevents pain at the amputation stump and stimulates its daily use, and the good perception of health as opposed to physical limitation is an incentive to social life, favoring successful work reintegration.

The goal of this study is to verify the current use of the prosthesis and the rate of return to work of patients with lower limbs amputated due to traffic accidents, treated at the amputee clinic of AACD/MG.

MATERIAL AND METHODS

Information was gathered from the medical records of patients with lower limb amputations resulting from traffic accidents registered at AACD/MG, in the years 2002 to 2004. In the months of June to May 2005, patients with lower limb amputations due to TA were invited to take part in an interview, to ascertain the current work situation, whether they had returned to the same activity as before the accident or retired, and to verify prosthesis use.

The quantitative analysis of the data was performed to characterize the sample of this study.

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SAMPLE CHARACTERIZATION

There was a review of 192 medical records of amputees, whereas 128 (66.7%) people were victims of natural causes and the remaining 64 (33.3%) underwent amputations due to external causes, of whom 46 (71.9%) due to TA, 14 (21.9%) due to an occupational accident not involving a vehicle, three (4.7%) due to an accident with a firearm and one (1.5%) due to an accident with a venomous animal. Of the 46 TA amputees, 15 that just changed prosthesis, 2 that desisted from starting rehabilitation due to transportation problems, 2 due to upper limb amputation and 1 that died were excluded from the study.

Therefore, 26 amputees took part in the interview. Of the interviewees, 22 (84.6%) were male and four (15.4%) female, with ages ranging from 14 to 72 years (mean age 37.7 years \pm 17.3 years).

As regards the current level of education: one (3.8%) illiterate, eighteen (69.3%) with primary education and five (19.2%) with secondary education and two (7.7%) with incomplete higher education.

As regards amputation region, of the 26 (92.9%) people with lower limb amputations, 15 (57.7%) were amputated above the knee (transfemoral level) and 11 (42.3%) below this segment (transtibial level).

At the time of the accident, the age bracket was from 7 to 37 years (mean age 28.7 years \pm 15.7 years) and the level of education was: two (7.7%) illiterate, 18 (69.3%) with primary education, six (23%) with secondary education.

Occupations/professions were classified according to the Brazilian Classification of Occupations (CBO). At the time of the accident the population studied consisted of: five motorcycle couriers, three general services assistants, two students, four freelance truck drivers, one military firefighter, a carpenter, a cooling technician, a housekeeper, a dressmaker, a furniture restorer, a military police soldier, a car polisher, an agricultural machine operator, a freelance sales representative, a farm worker and an elementary school teacher.

RESULTS

All 26 interviewees were suspended from their activities after the accident, for a period that ranged from 2 to 108 months (mean time 27.6 months \pm 44 months).

Of the 24 people that worked for a salary before the accident, 16 (66.7%) remained off work through the National Institute of Social Security - INSS, six (25%) retired due to disability and two (8.3%) based on age. Five of the people that remained off work through the INSS returned to work and three retired due to disability and one by age declared that they practice an activity to supplement their pension.

Of the nine amputees that are currently working, five returned to the same activity as before the accident (an elementary school teacher, a dressmaker, a cooling technician, a car polisher and a freelance sales representative).

Of the 26 interviewees, 26 (92.8%) received the lower limb prosthesis and after the acquisition, 16 (61.5%) people reported its use only for outings and the rest (10; 38.5%) continuously. The main complaints reported in relation to use of the prosthesis were: difficulties walking on irregular surface, for long distances and in climbing steps.

DISCUSSION

In relation to disabled individuals in general, amputees are those with the best rate of return to work, in comparison with individuals suffering from neuromuscular disease, sequelae of cerebral vascular accident and multiple sclerosis, among others.⁴ However, in this study a low return to work (20.8%) was evidenced in comparison with other studies on amputees (58.3% up to 89%).^{4,6} Some negative factors not demonstrated in the study, yet known by rehabilitation centers, such as delays in referral, inclusion of the amputee in rehabilitation programs and socioeconomic difficulties of the patients, are important characteristics to be considered. Some studies⁷ observed that patients admitted at an early stage to rehabilitation tend to return to work sooner.

In this study, it was observed that among the categories of work that led to return to the same activity as before the accident, it differed from other surveys. Shoppen and collaborators⁶ observed that many workers that were in the industrial and transportation areas adopted an intellectual activity with less demand for physical activity. Now in the study by Guarino et al.⁸ they verified that there was no change of category in the amputees that returned to work, as these were already performing more intellectual activities. In this study, it was observed that there were no changes of profession due to the fact that the amputees were self employed.

In spite of the low rate of return seen in this study, positive factors contributed toward this result, as it was the patients that had a low amputation level (transtibial), good level of education and presented good prosthetic adaptation. Some authors^{7,9} state that other factors are added to the success of inclusion or of occupational return, such as conditions of access to school education, to qualification, to professional rehabilitation programs and to projects for adaptation of the work environment to their new needs and limitations.

In view of this context, reintegration to work activities involves aspects both of rehabilitation and of the job market. According to Ferreira et al.,⁹ disabled people exhibit precarious conditions for service besides financial difficulties and are not capable of applying much pressure in relation to jobs, as they consider the limitation an impediment to their duties. Changes on the part of disabled persons and of society are required to improve this situation. On one hand, interested parties should invest in rehabilitation or in the adaptation of physical or mental conditions to pursue some remunerated occupation and, on the other, the market itself should prepare to employ these people.

In Brazil, the assurance of conditions of accessibility, as well as of the perception that people with a disability have the potential for professional activities, is evidenced in several excerpts of the Federal Constitution. However, between what the Constitution determines and what is observed in the lives of these people, there is still a lot of ground to cover, such as participation in the job market, notwithstanding the existence of laws that guarantee openings for these people. It is necessary to reflect on this subject, since according to the demographic census of 2000, most members of the population with some disability were not part of the market.⁹ Bearing in mind the difficulty of returning to work or getting a job after rehabilitation, disabled people seek disability retirement to guarantee their income, as observed in this study, with a high rate of retirees among young patients. As of June 2007, after the disability census performed by the IBGE (Brazilian Institute of Ge-

ography and Statistics), there might be some changes in relation to this benefit. According to Sorano,¹⁰ beneficiaries that are able to work and younger individuals, with less social security contribution time, might stop receiving the benefit if they do not fulfill the criteria to retire due to age or contribution time.

Professional, financial and physical losses for the individual and his family have a repercussion in society with the loss of productivity at work, social security costs and material losses that can be temporary or permanent. Therefore it is necessary to invest in this group, in its better qualification (courses and training), school education, self-esteem, accessibility and in the reduction of discrimination among companies.⁹

As observed in this study, rehabilitation discharge occurs after the patient achieves certain independence in relation to the prosthesis, yet some difficulties persist, as seen also in the study by Urbano Dulce¹⁰. He evidenced that most amputated patients needed crutches to walk on irregular surfaces and to climb stairs, after discharge and adds that adapting to a new orthopedic limb is not an easy task for the amputee, becoming a challenge for the rehabilitation team.

Independence is not based on the relationship with the prosthesis alone, but also on the individual's functional capacity, personal independence and well-being, even if there is no adaptation to the prosthesis. For the prescription of the best treatment and to avoid frustrating the patient, the rehabilitation team should take into account the age and psychological state of the individual, as well as the cause and the level of the amputated anatomic segment. There are other people capable of receiving the prosthesis, but only to walk around at home or in the local community and even so with the assistance of walker, crutches or cane. Other people are in physical conditions to walk long distances or even run, but there are still those that do not receive prosthetic adaptation and are rehabilitated just to be independent in changes of decubitus and in transfers.^{11,12}

CONCLUSION

Patients with lower limbs amputated due to traffic accidents treated at AACD/MG are rehabilitated with prosthetic adaptation and its use is normally for outings. The rate of return to work is low and disability retirement is common.

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