Adrien carries now his prosthesis longer he has retired social links.

Purpura gives not only hurts of ischemia requiring amputations in the acute phase of the disease, but also involvement of the growth plates, more or less important but sometimes up to a complete sterilization of the whole growth plate. This raises the later problem after the acute phase of axis deviation and disparity of limbs length.

So, the frequency of the involvement of the growth plate must no be underestimated. Children require multidisciplinary consultations bringing in the occupational therapists, the physiotherapists, and the doctors of physical medicine, orthopedic surgeons.

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P034-e

In vivo measurement of compression bandage interface pressures: Evaluation of different bandages, application methods and positions

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Keywords: Interface pressure; Compression bandage; Compression stockings; Application method; Reproducibility

Background. – A compression bandage has precise technical characteristics (structure, stretch, tension). But no standard exists for calculating the in vitro pressure exerted by a bandage. In addition, the in vivo pressures exerted on the skin by a compression bandage are still little understood.

Objective. – To perform in vivo measurement of the pressure of different compression bandages with different technical characteristics (elastic and non-elastic) and using different application methods and subject positions.

Methods. – The pressures were measured on the right legs of 20 healthy females at three different points on the leg (B1, C and F) using six types of compression devices (stockings, non-elastic bandage, elastic bandages with two different technical characteristics and three different application methods), and in three positions (supine, sitting, standing).

Results. – All the elastic compression bandages respect the principle of graduated pressure along the length of the limb (P < 0.0001), but for non-elastic bandage whose pressure did not differ between B1 and C (~22% and – 46% for Biflex® elastic bandages vs –1% and –39% for the non-elastic band, respectively at C and F relative to B1.

The pressures of all the bandages increase significantly (P < 0.0001) between the supine position and the sitting or standing position, especially with the non-elastic compression bandage (+4 mmHg and +5 mmHg for Biflex® elastic bandages using the spiral technique vs +8 mmHg and +12 mmHg for non-elastic bandage, respectively in B1 and C).

There is a marked variation in pressures between subjects for the non-elastic bandage (16% and 18% for the non-elastic bandage vs 8% and 12% for Biflex® elastic bandages using the spiral technique, respectively in B1 and C). The pressure increases significantly with the number of bandage overlaps, along with the tension of the bandage on application (P < 0.01).

Conclusion. – The pressure exerted depends on the application method and the technical characteristics of the bandage. The elastic and non-elastic bandages behave differently from one another, with the non-elastic bandages not appearing to comply with the medical recommendations concerning graduated pressure. In addition, there is a high level of variability between subjects for some compression bandages (non-elastic and elastic applied using the spica method). However, the reproducibility of application to the same subject is good when the tester is well qualified.

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P036-e

The effects of different sudden ankle inversion degrees on ankle brace efficacy

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Keywords: Ankle brace; Ankle inversion; Tilting platform; Ankle sprain

Objective. – This study was designed to test different inversion angles during a sudden induced inversion movement with brace or no-brace conditions.

Methods. – Twelve healthy subjects, without any recent ankle injuries participated in this study. A custom-built tilting platform was made and induced to the ankle an inversion movement looked like a real injury movement. Two conditions were measured barefoot: brace and no-brace conditions. The calcaneal inversion angle was measured by video at three different angles of tilt (18.9°, 25° and 29.8°) induced by the tilting platform.

Results/discussion. – The tested ankle brace reduced significantly the calcaneal inversion angle compared to the no-brace condition.

For the no-brace condition, the increase of tilting platform angle induced a 6% increase of inversion angle compared to the no-brace condition.

Conclusion. – This experimental study including the tilting platform enables to test the restriction of inversion motion induced by the brace. Significant differences between brace and no-brace conditions at different angles were.

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P035-e

Myctomata or Madura foot: A case report

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Keywords: Myctoma; Madura foot; Diagnosis; Treatment; Amputation

Introduction. – Myctoma or Madura foot is a chronic skin infection due to bacterial or fungal pathogens. It is endemic in tropical countries, but rare in temperate climates. It is known by its elective podal location. Untreated, the disease progresses to destruction of soft tissue and adjacent bone structures with deformation of the limb.

The nature of this condition is illustrated by reference to a recent observation in our service and a brief discussion of some important diagnostic and therapeutic.

Observation. – It is 23-years-old man, consulted for a painful foot, with the presence of nodules progressing for 5 years, occurred in the aftermath of an injury to the left foot arch. Radiography of the foot shows an anterior tarsal and mediotarsal osteolysis. Bone biopsy reveals the presence of Maduarea mycetomatis, covered by a radical surgical treatment type of amputation of the leg. A tibial prosthesis was performed with recovery of independence of the march.

Discussion. – These are inflammatory pseudo-tumors with multiple fistulas of slow evolution containing fungal grains or actinomyctic of exogenous origin. They grow in soft tissues under the skin and can reach the bone, making the gravity. Diagnosis of myctoma should be considered in chronic skin swelling, painless, fistulas, draining grains. Modern imaging, although non-specific, can guide the diagnosis and assess the extension. The treatment is medical and surgical. The recurrence rate remains high (50%).

Conclusion. – Myctoma should be thought about in differential diagnoses in a chronically swollen and painful foot to avoid, as shown in our case report, a delayed diagnosis leading to functional and esthetical impairments.

Further reading


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P037-e
Cause of non-acquisition of assistive technologies after recommendation: Cross-sectional survey
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Keywords: Assistive technologies; Recommendation; Acquisition rate
Introduction.– In order to improve the process of recommendation assistive technologies (AT), it is necessary to understand the reasons for not acquiring AT.
Objective.– Investigate the reason of non-acquisition of AT after recommendation in the unit of MPR of the Limoges university hospital.
Methods.– Telephonic cross-sectional survey with collection of acquisition rate of AT recommended. In case of non-acquisition of AT, the reason were collected. For AT acquired the satisfaction was evaluated by a Likert scale with four dimensions.
Results.– A total of 123 patients were supported in 2010 and a total of 226 AT have been advocated. Acquisition rate was 48% overall with 10% regarding domestic activities and 90% for aid type cushions and anti-bed sore mattresses.
The main reason for non-acquisition reported by the patients was a recommendation not adapted to the expectations (66%), the second was the lack of funding (17%) then came the change of plans (2%). Eighty-five percent of patients were satisfied with their AT once acquired.
Conclusion.– In our study, the rate of acquisition of AT is around 50%, which corresponds to a good standard in the literature [1,2]. Contrary to some misconceptions, lack of funding was not the main cause of non-acquisition. Most often AT unvested did not meet expectations. A better assessment of needs in developing environment evaluation [2] and better information on financing an acquisition rate would be higher.
References

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P038-e
Necrotizing fasciitis of the legs of unknown origin responsible for a double amputation
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Keywords: Necrotizing fasciitis; Amputation; Prosthetic use
Introduction.– The necrotizing fasciitis is a rare infectious disease and of sometimes quickly fatal evolution.
We report a case of necrotizing fasciitis of both legs in the consequences of a deep vein thrombosis of a lower limb, and which quickly evolved towards the amputation. The originality of this work is in the exhibition of a complication so formidable of the fasciitis, as well as in the analysis of the functional future and the quality of life after an intervention by prosthesis.
Observation.– It is about a 40-year-old patient, without considerable history, who was admitted in the service of internal medicine for etiologic assessment of a deep vein thrombosis of the left lower limb. The assessment of thrombophilia was negative. The evolution was labelled by the quickly progressive installation of a necrotizing fasciitis of both legs within the bacteriological taking a Staphylococcus aureus. The treatment consisted of a triple antibiotic therapy, but in front of the not improvement, a bilateral amputation of legs was imperative. A double prosthesis was proposed after healing of stumps with a follow-up in physical and rehabilitation medicine.
The functional result in six months of the apparatus was judged on the following parameters: the balance estimated by Time Up and go test, wandering judged by the 2 min test and Houghton score and the measure of the autonomy estimated by Barthel index.
At our patient, we noted a modest improvement of the various shaders studied because of the not observance of re-education due to the lack of means.
Conclusion.– The necrotizing fasciitis is a serious disorder the etiology of which is not always obvious and the outcome of which can be formidable sometimes leading to the amputation; this one is a major source of handicap and loss of autonomy.
The considerable development of materials and possibilities of prosthesis during these last 20 years returned this interesting alternative.

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P039-e
Major amputations of the lower limbs
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Keywords: Amputation; Equipment; Rehabilitation
Introduction.– The major amputation of the lower limb is a handicap that can affect the functional capabilities of individuals, their social and professional life and psychology. Indeed, these effects depend as much of the equipment as good medical care physically and psychologically. The objective of this study was to evaluate our management of major amputations of the lower limbs and their equipment in Tunisia.
Materials and methods.– This is a retrospective study of patients hospitalized in physical medicine and functional rehabilitation of the Institute of Orthopaedics Kassab for management of lower limb amputation between January 2009 and March 2013.
The evaluation included a clinical examination, functional assessment and evaluation of the equipment if it is acquired.
Results.– Thirty-six patients with a mean age of 59.26 years were included in this study. It is a trans tibial amputation in 25 patients and femoral trans in 14 patients. Three patients had bilateral amputation. These amputations were due to arterial disease in 30 patients. Initially, a poor quality stump was found in 20 patients and muscle padding was good in 23 patients. A stiffness was found in most of our patients. Thirty-two patients had prosthesis. The vesting period of the final prosthesis is an average of 24 months. An adaptation of the prosthesis was prescribed in 23 patients. Ten patients were in wheelchairs.
Discussion.– The amputation of a limb leads to a radical change in the life of a patient. Support for rehabilitation takes into account the patient’s disability status and possibilities for fitting and rehabilitation. Patients often wait to acquire a power reserve as complete as possible. However, the acquisition of the final prosthesis may require one year in our patients, which reduces their physical abilities and makes recovery more difficult.
Further reading

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P040-e
Orthopaedic artificial limb for Child in Cotonou: What specificity in the phase of polio eradication?
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Keywords: Appareillage ; APPAREIL PROTHÉTIQUE ET ORTHOTHIQUE ; Appareillage prothétique et orthétique; Annals of Physical and Rehabilitation Medicine 56S (2013) e22–e34

Introduction
Service de médecine physique et de rééducation fonctionnelle, Institut National d’orthopédie Mohamed Kassab, 2010 Manouba, Tunisia

Further reading

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