P469-e  
Cohort study and predictive factors of functional outcome in amputated patients 80 or more years old
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Keywords: Elderly; Amputated; Outcome; Functional; Walk; Factors; Geriatrics; Rehabilitation

Objective.– Isolate medical and social predictors of functional outcome in elderly amputated patients 80 or more years old.

Population.– One hundred and thirty patients, aged 80 or more, affected by a minor amputation (AM), transtibial (ATT) or transfemoral (ATF) hospitalized from 2007 till 2013.

Method.– Retrospective qualitative and quantitative analysis of medical and social files.

Results.– Thirty-five % ATF, 37% ATT, 2% AM, 94% AM, 90% ATT, 58% AM followed prosthetic rehabilitation. Seventy-six % ATT, 88% ATT and 75% AM walked again. Fifty-one % ATF, 60% ATT put on by themselves. Forty-nine % AM, 58% ATT and 50% AM have a walking distance upper to 100 m. Thirty-seven % ATT, 37% ATT and 36% AM returned at home. Nine % AM, 15% ATT and 17% AM were hospitalized again.

Conclusion.– Majority of elderly amputated patients put on by themselves, walk upper than 100 meters. One third of them return to home. A secondary analysis of the data (open/close surgery, medicinal treatments, additional surgery, period between surgery/prosthesis rehabilitation, previous falls, previous speed, nutritional assessment . . . ) will look for geriatrics predictive factors of functional outcome.

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P470-e  
Detection of progressive scoliosis with 3D-surface topography (Biomod-L®): A prospective study on 100 patients
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Keywords: Surface topography; Spine; Scoliosis; Radioprotection

Objective.– To study sensibility and specificity of Biomod-L® of 3D-surface topography the back, in order to detect Cobb angle progression during scoliosis follow-up.

Method.– Non-interventional prospective study on 100 consecutive patients. Three progression thresholds of 3°, 5° and 10° of Cobb angle were defined. Biomod-L® were performed in standard erect position and “rolled up shoulders” position. Parameters were humps with a 2° progression threshold, and spinous line curvatures with a 10° progression threshold. Positive and negative predictive values, sensibility and specificity of surface parameters for predicting worsening of Cobb angles, with 3°, 5° and 10° progression thresholds, were calculated.

Results.– Combining an increase of more than 2° “of one hump at least OR of the humps sum in either one of the two measurement positions” detected 3%, 5% and 10% of Cobb angle worsening with sensibilities of 86%, 86% and 100% and specificities of 58%, 50% and 43%, respectively.

Conclusion.– Using topographic parameters as trigger of radiographs may reduce the number of X-rays controls from 40% to 56% in scoliosis follow-up.

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P471-e  
Returning to sport after transfemoral amputation
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Background.– Concerning amputee patients return to sport needs careful setting of lower limb sport prostheses to recover feeling and improve performance.

Method.– We present the case of a 35-years-old man, who was transfemoral amputated of his left limb due to a shark bite and who wants to do surfing and skateboarding again. He has a daily prosthetic C-LEG microprocessor hydrolic monoauxial knee which stance phase control joint to an energy storing prosthetic feet (ESF) Flex-Walk. For surfing, he has the BTK sport knee with shock absorber and elastic tendons to duplicate flexion and extension movement. They were joint to the Flex-Walk foot with non-slip sole on reverse prehension and above it an adjustable tube adapter. For skateboarding, he uses a polycentric knee with an ankle containing a “silent block” system to improve mobility.

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P472-e  
Returning to walk for a two arms and one leg amputated man
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Keywords: Amputation; Prosthesis; Walking

Background.– Nowadays, amputated people can benefit of technics that respond to all situation.

Observation.– Mister B., 65-year’s-old had a car accident in Ivory Coast in august of 2012. Quickly, his medical evolution led to the amputation of his two arms and right leg. He also suffered from a sensitive and motor dysfunction on his left leg. At the beginning, nobody thought that he could walk again. Actually, because he was motivated and got cured of his left leg objectives were changed. With personalised equipment, he could stand and then walk.

Discussion.– The amputation of one limb is rarely associated with a bad functional prognosis. However, when several limbs are amputated, we must much more think about the care. The result can be different between two people with the same dysfunction.

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P473-e  
Mirror therapy in the treatment of the phantom limb pain in amputees
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Background.– Phantom limb pain (PLP) is a major problem after limb amputation. Even though mirror therapy (MT) seems to be an interesting therapeutic option, its application in clinical practice remains to be clarified.

Objective.– To conduct a literature review about MT treatment in amputees (lower or upper limb) suffering from PLP.

Method.– We searched following keywords, phantom limb/mirror therapy or phantom limb/mirror visual feedback, in the PUBMED database. Nineteen studies dealing with mirror therapy in limb amputees (lower or upper limb) have been selected, read and analysed.

Results.– Our review is the 7th one about MT, and the second devoted to MT’s application in amputated persons. Among the 4 randomized controlled trials, 2 showed the effectiveness of MT treatment on PLP and 2 showed an improvement in the phantom limb movement (PLM). Other papers were 5 prospective studies adding up 64 patients and 10 case study papers adding up 33 patients. All of these studies reported the effectiveness of the MT in PLP.
P474-e
The vertipro: Modular shell for standing teenager
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Keywords: Orthosis; Verticalisation; Teenager

Background.– The verticalisation of children with multiple disabilities is a recognised need, we use molded for smaller hulls and prefabricated devices Stand-Up type for older teenagers at the end of growth. During the rapid growth phase of puberty hulls are poorly accepted, bulky and quickly too small and Stand-Up too. So, we devised a modular device adjustable vertical integration to accompany the teenager during this period.

Results.– Molded valves ensure the maintenance of the lower limbs, pelvis and trunk, they can be changed if growth imposes A metal frame on wheels can make the necessary adjustments to the initial adaptation and evolution stature and orthopedic child. Twenty-three aircraft of this type were made at the meeting. The device demonstrated its effectiveness with families and institutions by their tolerance and acceptance. It remains reserved for children whose head is held good. We present this unit picture on a poster.

Conclusion.– We were able to continue the vertical integration of these adolescents with multiple disabilities in good conditions.

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P475-e
Reflections about the boot assessment of the child
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Keyword: Child evaluation shoe

It is difficult to assess the shoe and its impact on the child’s foot. This evaluation can be done on the shoe itself: its configuration, its materials, its wear but must still report it to the use that is made of the shoe, each child’s own behavior and there great variability depending on the child. Before assessing the impact of footwear on the infant foot, he must first understand the evolution of the foot, its growth and genetic programming. We all know that in most cases the nature is responsible for a favorable development and other progressive deformities of the feet will emerge and continue their development regardless of the boot. We will develop the tools to answer this question.

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P476-e
Type-B-IIIa hip rotationplasty: A rehabilitation challenge
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Keywords: Type-B-IIIa rotationplasty; Hip rotationplasty

Background.– Type-B-IIIa hip rotationplasty (HR) is performed in children with tumors that require complete femur resection and consists in the placing of the rotated (180°) lateral tibial condyle into the acetabulum after disarticulation of the knee.

Observations.– A 9-year-old boy, with a 20 cm non-functional dismetry after reconstruction surgeries because of metastatic Ewing sarcoma of the left proximal femur. Before submitted to a type-B-IIIa HR, he started a pre-surgery rehabilitation program (RP). Postoperatively, at the third week the pre-prosthetic RP was introduced. Approximately 1.5 months after surgery cast was removed and passive articular movements of the new hip joint were introduced. Inpatient prostatic RP was bi-diary, consisting of physical therapy and hydrotherapy during 2 months and continued outpatient at daily-basis, Pre-prosthetic and post-prosthetic RP resulted in ROM and muscle strength gains. Functionally he produces a good gait pattern and climb stairs without orthotics, with gains in autonomy and social integration.

Discussion.– After a limb salvage procedures, it is of utmost importance the presence of a multidisciplinary team to the best management of such “dramatic” approach. Assuming the conversion of lateral aspect the proximal part of the tibia into a new femoral head, it is required a long-term follow-up and outpatient RP.

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P477-e
Support of an amputee in hospital at home rehabilitation (HAH-R), About a case and review of literature
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Keywords: Amputee; Rehabilitation; Hospital at home

Background.– Hospital at home rehabilitation (HAH-R) reduces the conventional hospital rehabilitation time offering at home similar conditions of quality and safety of care. Is it an appropriate way to the rehabilitation of amputees? Observation.– Mr. W. 81-years-old with major cardiovascular history, having undergone a transfemoral amputation after acute ischemia of the left lower limb. He was admitted in HAH-R 5 months after his amputation (stump completely healed). Support included daily physiotherapy-ergotherapy and education for wearing prosthesis and sleeve. The setting of the provisional prosthesis was made upon entry into HAH-R. The patient became independent for the use of the prosthesis and walking. No local or systemic complications were noted after definitive prosthesis.

Conclusion.– Few studies evaluate the HAH-R for the amputee. It is after the cicatrization phase that it seems most appropriate. It keeps track of errors (boot, compensations . . .) and changes in volume of the stump, which is frequent after returning home. More studies are required to better assess this type of support.

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P478-e
Relationship between clinical measures and podobarometrics in evaluation of pediatric flat foot
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Keywords: Pediatric flat foot; Podobarometrics

Background.– The pediatric flat foot is a frequent presentation in clinical practice. Definition of what exactly constitutes a flat foot remains debatable, though is widely accepted that a low medial arch and a valgus heel position are consistent attributes, they are not definitive or absolute parameters to evaluate and conclusively managed it. The podobarometrics, can be very useful as complement to other techniques of diagnostic and exploration at the time of carrying out an accurate diagnosis in pathology of the foot in paediatrics flat foot. Evaluate the efficacy of podobarometrics in evaluation of pediatric flat foot.

Methods.– One hundred and twenty preschool children, range 3–6 years participated, 60 with flexible flat foot and 60 controls. Clinical measures of static foot posture were obtained during standing. Peak plantar pressures under hallux, forefoot, midfoot and rearfoot were obtained during standing and walking.