

CO68-007-e

**Functional outcome in a cohort of lower limb amputees**A. Quesnel<sup>a,\*</sup>, F. Beuret-Blanquart<sup>a</sup>, L. Benadiba<sup>b</sup>,  
F. Dujardin<sup>b</sup>, E. Verin<sup>a</sup>, A. Palacio<sup>a</sup><sup>a</sup> Centre Régional de Médecine Physique et de Réadaptation “Les Herbières”,  
Bois-Guillaume, France<sup>b</sup> CHU de Rouen, Rouen, France

\*Corresponding author.

**Keywords:** Amputation; Lower limb; Prosthetic fitting; Functional outcome; Predictors; Epidemiology**Objectives.**– To describe a cohort of lower limb amputees and evaluate its functional outcome after prosthetic fitting, as well as the existence of potential predictors.**Methods.**– Descriptive, monocentric and prospective study, including all patients hospitalized in CRMPR-HN for prosthetic fitting of a unilateral lower limb amputation in 2012.**Results.**– Forty-one patients were included, 31 transfemoral and 10 transtibial amputees. Amputations were from vascular, infectious, traumatic and tumor origin in respectively 58.5%, 17.1%, 14.6% and 9.8% of cases. Mean walking distance was 543 ± 1000 m, walking speed 1.9 km/h ± 1.3, TMWT 63.3 m ± 45.0 and TUGT 37.2 s ± 33.9. Functional outcome had improved at 6 weeks after discharge. Mean LCI-5 was 37.9 ± 14.7 and Houghton score 7.6 ± 2.8 at 6 weeks after discharge.**Discussion.**– Functional outcome after amputation from infectious origin was close to that of amputation from traumatic or tumor origin, even in arteritic context. Age, functional independence, time between amputation and prosthetic fitting, standing balance on unaffected limb, hip extension restriction and some comorbidities were significantly correlated with functional outcome. Simple predictors could estimate the functional outcome after prosthetic fitting.<http://dx.doi.org/10.1016/j.rehab.2014.03.427>

CO68-008-e

**Raising awareness of the use of orthotic devices in juvenile rheumatoid arthritis**L. Lima<sup>a,\*</sup>, D. Jesus<sup>b</sup>, T. Inês<sup>a</sup>, C. Alves<sup>c</sup>,  
M.P. Carvalho<sup>a</sup>, V. Ermida<sup>a</sup>, J. Caldas<sup>a</sup><sup>a</sup> Centro Hospitalar Tondela Viseu, Viseu<sup>b</sup> Hospital Central do Funchal<sup>c</sup> Centro Hospitalar do Alto Ave

\*Corresponding author.

**Keywords:** Juvenile rheumatoid arthritis; Orthotic devices; Rehabilitation**Background.**– The juvenile rheumatoid arthritis (JRA) is the most common chronic rheumatologic disease in the childhood. Almost all children with JRA can keep an active lifestyle but the ones with polyarticular involvement may have problems during disease flares.**Methods.**– We present a case of a 16-year-old female with polyarticular onset juvenile idiopathic arthritis with incapacitating chronic pain that has become independent in her daily living with the help of orthotic devices. We pretend to describe (using video and photography) the several orthotic devices that were chosen accordingly to her health, disability and functioning.**Discussion.**– Physical medicine and rehabilitation (PMR) is generally centred in treatments outside the inflammatory period of the disease relying mainly in stretching and passive or active mobilization. Other medical specialties commonly forget to refer to PMR during ongoing joint inflammation in order to provide orthotic devices to reduce articular load and these patients simply begin physical therapy after chronic weakness and contractures. PMR is paramount to present preventive measures reducing the articular load during ongoing joint inflammation, allowing for improved quality of life in the long-term and a more active lifestyle.<http://dx.doi.org/10.1016/j.rehab.2014.03.428>

CO75-002-e

**Prospective results of immediate correction of scoliosis in ARTbrace**

J.C. De Mauroy

Clinique du Parc, Lyon, France

**Keywords:** Scoliosis; Prospective study; Immediate results; In-brace correction  
**Background.**– The ARTbrace is an asymmetric rigid (polycarbonate) torsion brace with two lateral shells and front opening.**Results.**– The immediate in-brace correction of the Cobb angle is the fundamental parameter of success of non-surgical orthopaedic treatment of scoliosis. The results of a prospective series of the first 75 patients were studied using EOS X-ray and compared with results obtained by other braces.

Radiologically, in the frontal plane, the immediate reduction in-brace is on average (0.69).

**Discussion.**– Depending on the type of curvature the results were, thoracolumbar (0.93), lumbar (0.71), double major (0.67) lumbar (0.71). According to the SRS criteria (31 cases) the results were, thoracic curves (0.66), lumbar (0.80). According to the initial angulation the results were 20–29° = (0.77), 30–39° = (0.65), > 40° = (0.42). In 27 cases with initial kyphosis < 30°, improving the flat back was 7.7°. Apical rotation was improved by about 50%. Clinically, the push-up effect was 1.75 cm. After at least 1 month of continuous wearing, for Bunnell ATR, improvement was (0.50) and for lumbar (0.85). The improvement was 40% compared to the plaster cast and 60% compared to the best TLSO braces.**Conclusion.**– All 3D radiological and clinical parameters improved significantly and ARTbrace seems to be the most corrective brace.<http://dx.doi.org/10.1016/j.rehab.2014.03.429>

CO75-003-e

**French validation of Brace Questionnaire**

J. Deceuninck\*, J.C. Bernard

Croix Rouge française, CMCR des Massues, Lyon Cedex 05, France

\*Corresponding author.

**Keywords:** Quality of life; Scoliosis; Adolescent; Brace**Background.**– Quality of Life (QoL) scales have to be introduced in the treatment evaluation of our patients with adolescent idiopathic scoliosis. Vasiliadis create the Brace Questionnaire (BrQ), the one, which is specific for brace, treated adolescents. This tool was developed and validated in Greek.**Methods.**– The BrQ is made of 34 items on Likert Scale, divided in 8 domains. The questionnaire was developed in order that the child could fill in it alone and is adapted for 9 to 18-years-old. The lowest scale is 20 and the best 100. The highest scales show a better QoL. The process of cultural adaptation of the questionnaire was in accordance with the guidelines of the International Quality of Life Assessment (IQOLA) Project.**Results.**– Statistical analysis. Firstly, descriptive statistics will be used to calculate mean scores and standard deviations for a given question and a domain. The second level will be comparative concerning reliability and validity.**Further reading**Vasiliadis E, Grivas TB, Gkoltsiou K. Development and preliminary validation of Brace Questionnaire (BrQ): a new instrument for measuring quality of life of brace treated scoliotics. *Scoliosis* 2006;1:7. [doi:10.1186/1748-7161-1-7].<http://dx.doi.org/10.1016/j.rehab.2014.03.430>

CO75-004-e

**Mechanical characterization of lumbar belts by measuring stress and interface pressure**R. Bonnaire<sup>a,\*</sup>, M.O. Lapointe<sup>b</sup>, Y. Roumieu<sup>c</sup>,J. Molimard<sup>a</sup>, P. Calmels<sup>d</sup>, R. Convert<sup>e</sup><sup>a</sup> École des Mines de Saint-Étienne, Saint-Étienne cedex 2, France<sup>b</sup> École Polytechnique de Montréal, Montréal, Canada<sup>c</sup> Université de Savoie, France<sup>d</sup> CHU Bellevue, Saint-Etienne, France<sup>e</sup> Thuasne,

\*Corresponding author.