Keywords: Limb defects; Prenatal consultations

Objective.– The limb defects are rare. The antenatal diagnosis has led to a reduction of effective birth and organization of care at birth [1,2].

Method.– Fifty-three pregnancies, 10IMH has been made for more or less severe malformations [3]. Decisions regarding the coming of pregnancy are highly variable from one couple to another and from one team to the other.

Discussion.– Several tables antenatal clinics were found different at birth. Functional capabilities are different for the same anomaly… and it is impossible to have a systematic description.

References

http://dx.doi.org/10.1016/j.rehab.2014.03.1283

P377-e

FLEXED AND HYPEREXTENDED KNEE IN CEREBRAL PALSY

E. Dollaku, K. Christodoulou, G. Di Rosa

Keywords: Cerebral palsy; Knee flexion contracture; Dynamic orthosis; Tolerance

Objective.– Assessing patient compliance and impact on sleep.

Methods.– Questionnaire in 92 patients assessing wearing time and regularity, sleep quality, tolerance.

Results.– Seventy answers, 18 females, 52 males aged from 5 to 23 (28 GMFCS I & II; 19 GMFCS III & IV; 23 GMFCS V). Compliance: 68% worn every night (among which 52% of simultaneous bilateral treatment); 15.7% every other night; 12.8% less than 3 nights a week; 2.8% abandoned Wearing night time; 78.7% > 7 hours. Tolerance: 74.2% excellent or good, 18.6% medium; 7.1% bad.

Discussion.– Assessing sleep quality before treatment and therapeutic proposals after analysis of disturbances if necessary.

Conclusion.– Ultraflex® dynamic orthosis uses a low load prolonged stretch with really good results on walking and not walking child, not least thanks to its good tolerance, which allows to propose it early in case of uni or bilateral knee flexum.

Further reading

http://dx.doi.org/10.1016/j.rehab.2014.03.1286

P378-e

Problems of head-holding in children with cerebral palsy

P. Toullet, A. Jouve

Keywords: Orthoses; Botulinum toxin; Cerebral palsy; Gait; Hyperextended knee; Flexed knee

Introduction.– Flexed and hyperextended knee represent frequent gait abnormalities in children with cerebral palsy. Spasticity, muscle contracture formation, impairments of motor control, weakness, balance deficits, and extrapyramidal motions can all contribute to the functional limitations imposed at the knee [1]. Several conservative management strategies are available. The aim of our

http://dx.doi.org/10.1016/j.rehab.2014.03.1286
study was to compare how conservative treatments (physiotherapy, orthoses, botulinum toxin A injections and a combination of these) influence these two different patterns.

**Material and methods.**—Fifteen hemiplegic and 10 diplegic children were recruited. During the clinical evaluation a video-recording of child’s gait before and after treatment with BTX-A injections (walking barefoot and with orthosis) was made. The Observational Gait Scale (OGS) based on split-screen video with slow-motion facility and Gross Motor Function Classification System (GMFCS) were used for the assessment.

**Results.**—From our preliminary data a multimodality approach seems to be more effective than single modality to maintain a correct alignment of the knee, mainly for hyperextended pattern.

**Discussion.**—An adequate management of the knee motion results in a more functional gait pattern.

**Reference**


http://dx.doi.org/10.1016/j.rehab.2014.03.1287

**P381-e**

**Effect of radial shock wave therapy for reduction of muscle hypertonia in cerebral palsy**

M. Gonkova, E.M. Ilieva, I. Todorova, G. Ferriero, I. Chavdarov

*Department of Physical and Rehabilitation Medicine, Medical University of Plovdiv, Plovdiv, Bulgaria*

*Unit of Occupational Rehabilitation and Ergonomics, Salvatore Maugeri Foundation, Scientific Institute of Veruno, Italy*

*Specialized Hospital for Rehabilitation of Children with Cerebral Palsy “St. Sofia”, Sofia, Bulgaria*

*Corresponding author.

**Keywords:** Spasticity; Cerebral palsy; Radial shock wave therapy

**Background.**—Extracorporeal shock wave therapy is used for the treatment of musculoskeletal disorders.

**Objective.**—The aim of our study was to investigate the effect of radial shock wave therapy (RSWT) on muscle spasticity of plantar flexor muscles in children with cerebral palsy. Twenty-five children, mean age 4.84±3.11 years, with spastic diplegia and hemiplegia participated in the study. One placebo session was applied followed four weeks later by one active treatment session. We used passive range of motion, Modified Ashworth Scale and baropodometric measurements for outcome assessment.

**Results.**—After RSWT, a significant increase in passive range of motion was observed: 47.00±2.298 versus 33.25±2.208 (P<0.001), which persisted at fourth week (44.12±1.938, P<0.001). The Modified Ashworth Scale score decreased from 2.77 to 2.00 points (P<0.001), persisting at the fourth week (2.15±0.76, P<0.001). Baropodometric measurement showed a significant increase in the contact plantar surface area (from 81.32±6.14 to 101.58±5.41 cm², P<0.001) and in heel pressure (from 50.47±6.61 to 75.17±3.42 N/cm², P<0.001).

**Conclusion.**—There is a significant decrease of spasticity in children with cerebral palsy after the application of RSWT.

**Further reading**


http://dx.doi.org/10.1016/j.rehab.2014.03.1288