

(HABIT) for improving bimanual coordination in children with hemiplegic cerebral palsy. *Dev Med Child Neurol* 2006;48:931-36.

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P056-EN

A new orthesis for multilevel surgery on lower limbs in cerebral palsy children

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Keywords: Cerebral palsy; Surgery; Apparatus

Objective.— Immobilization after surgery of lower limbs is difficult and long to install on the operating table, inducing complications and delays in starting physiotherapy. We built posture apparatus, which can be made before the operation, fitted to the orthopaedic corrections after surgery and removable and adjustable for the needs of physiotherapy.

Method.— We improved this orthesis during the follow-up of 31 cerebral palsy patients after multilevel surgery on the lower limbs.

Results.— The apparatus includes two valves, one crural, one sural connected by a flexible metallic blade according to the residual permanent flexion of the knee and allowing a regulation in length; inside, there is a removable plastazote, it can be cut and enlarged for dressings. A droplet flexible valve with elastic is used to protect the heel. A control system of the abduction completes the apparatus.

Discussion.— Benefits are evident: time of anesthesia is reduced, surgical cost is reduced, nursing is quite easier, and physiotherapy is earlier. During this study, we had only few complications and because of this orthesis we avoided great complications.

Conclusion.— This orthesis seems to be useful in the treatment of cerebral palsy patients with multilevel surgery on the lower limbs.

Further readings

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P057-EN

Premature epiphyseal closure in an adolescent treated by retinoids for acne: An unusual cause of anterior knee pain

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Keywords: Retinoids; Knee; Premature epiphyseal closure

Introduction.— Retinoids are effective and widely used for the treatment of severe acne. Their use can be, however, associated with numerous side effects. For example, some rare cases of premature epiphyseal closure were reported.

Observation.— A sixteen-year-old soccer player consulted for bilateral progressive anterior knee pain, since two months, evoking a femoro-patellar origin. After physiotherapy, the pain decreases on the right but remained on the left. The history taking brought out the use of isotretinoin for more than 6 months (0.5 mg/kg). Magnetic resonance imaging (MRI) findings showed an irregularity of the growth plate and an important metaphyso-epiphyseal oedema, more marked on the left. The diagnosis of retinoid induced premature epiphyseal closure was retained. The treatment was stopped, with a resolution of symptoms within

thumbprint-like growth plate lesion. Eighteen months later, neither limb-length discrepancy nor static disorder was noticed.

Discussion.— Premature epiphyseal closure is a rare complication of retinoid treatment of acne. Retinoids induce an invasion of the growth plate by osteoclasts and a decrease in proteoglycans synthesis. The knee seems the most involved joint. The clinical presentation is aspecific, sometimes lightly symptomatic. A careful pharmacological history and an appropriate imaging are necessary. MRI is now the gold standard. It shows an irregularity of the growth plate with an oedema on both sides. In chronic phase, a thumbprint-like image may persist. The symptoms resolution arises in few weeks after the treatment interruption. A single case of static disorder was reported until now. The small size of the growth plate interruptions, insufficient to lead to a growth disorder if the medication is stopped early enough, explains probably it. This complication being rare, a radiological follow-up of the young patients treated by retinoids is not proposed.

Further readings

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P058-EN

Skin traction for humeral fracture healing, after surgical resection of an osteochondroma, in a case of child with persistent vegetative state

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Keywords: Osteochondroma; Humeral fracture; Skin traction; Persistent vegetative state

Introduction.— Humeral fracture after surgical resection of an osteochondroma, in a case of child with persistent vegetative state.

Observation.— Child aged eleven, persistent vegetative state after surgery of brain stem neoplasm. Humeral diaphysis osteochondroma diagnosed in 2006. Humeral diaphysis osteochondroma complicated by pressure ulcer with hematoma.

Orthopaedic procedure was determined. A simple excision of the tumor was performed.

After surgery, the arm was immobilized. A shortening and enlargement of the arm was noticed. X-ray was performed; we diagnosed a humeral diaphysis fracture.

Surgery objected because of risks of infection and anesthesia; a simple immobilization was impossible because of stereotypic movement disorders, and psychomotor agitation.

A skin traction was applied for three weeks, the treatment for that fracture was conclusive.

Discussion.— Conclusive orthopaedic treatment, by skin traction, for a humeral diaphysis fracture for a child with persistent vegetative state and stereotypic movement disorders.

Further readings

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P059-EN

Obstetrical brachial plexus palsy: 22 cases

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Keywords: Obstetrical palsy; Brachial plexus; Pediatric rehabilitation

Objective.— Our work aims to assess the modalities of management of obstetrical brachial plexus palsy in the PMR pediatric unit.

Material and methods.– A retrospective study covering a population of 22 patients followed in pediatric functional rehabilitation unit during the period May 2010 to April 2011.

Assessment of shoulder impairment was based on the listing of deltoid, biceps and external rotators of the shoulder and on the study of passive mobility.

Functional assessment made according to the Mallet classification.

Results.– The analysis showed a complete recovery of the deltoid and biceps in 22.7% of cases at 12 months of evolution. In functional terms and with a mean of 2.6 years, 57.1% of children recovered a Mallet stage III.

Three children underwent surgery (nerve relocation). This surgery has improved functional status in all cases.

Discussion and conclusion.– Muscle spontaneous recoveries remain low after a year, but the percentage of functional recovery increases with time and also after nerve reimplantation surgery.

Further readings

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P060–EN

Assessment of functional independence according to the WeeFIM score in children with cerebral palsy after postoperative rehabilitation

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Keywords: Cerebral palsy; Operation; Functional independence

Objective.– To determine whether rehabilitation after orthopedic-surgical treatment of the lower extremities has an influence on functional independence in children with cerebral palsy (CP).

Subjects and methods.– A historical-prospective study included 44 treated children with CP that were treated from May 2000 until June 2009 at the Department of Physical Medicine and Rehabilitation University Clinical Centre Tuzla. The main criteria for entering the study were diagnosed CP and performed orthopedic-surgery of the lower extremities during rehabilitation treatment. Assessment of the functional independence score was performed according to the functional independence measure for children (WeeFIM).

Results.– In our study, functional independence were improved, the average value of total score according to WeeFIM before the operation was 42.9 ± 23.4 , and after the postoperative rehabilitation it was 69.7 ± 27.7 , with an average difference from 26.9 (% 95 CI=21.0 to 32.6) which had a high statistical significance ($P < 0.001$).

Conclusion.– Surgical intervention performed on the lower extremities in children with cerebral palsy along with intensive rehabilitation can improve functional independence.

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