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CP Research News

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1: Int J Eat Disord. 2008 Jul 17. [Epub ahead of print]

Cerebral palsy and anorexia nervosa.

Webb K, Morgan J, Lacey JH.

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OBJECTIVE:: To describe the management of a woman with cerebral palsy and anorexia nervosa. **METHOD::** We carried out a literature search and gained consent and a history from the patient. We explored the etiological and ethical issues raised in this case. **RESULTS::** Etiological issues are raised, looking at the interaction between physical disability and self-image. Clinical and practical difficulties of caring for a patient with physical disability properly on an eating disorder unit are discussed, as well as ethical issues concerning mental capacity and the use of the mental health act in anorexia nervosa. **CONCLUSION::** This case reminds us again that we can learn much from listening to patients. In this instance, service and operational policies on managing disabilities on the unit, were shaped by her input. (c) 2008 by Wiley Periodicals, Inc. Int J Eat Disord 2008.

PMID: 18636539 [PubMed - as supplied by publisher]

2: N Engl J Med. 2008 Jul 17;359(3):262-73.

Long-term medical and social consequences of preterm birth.

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BACKGROUND: Advances in perinatal care have increased the number of premature babies who sur-



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vive. There are concerns, however, about the ability of these children to cope with the demands of adulthood. **METHODS:** We linked compulsory national registries in Norway to identify children of different gestational-age categories who were born between 1967 and 1983 and to follow them through 2003 in order to document medical disabilities and outcomes reflecting social performance. **RESULTS:** The study included 903,402 infants who were born alive and without congenital anomalies (1822 born at 23 to 27 weeks of gestation, 2805 at 28 to 30 weeks, 7424 at 31 to 33 weeks, 32,945 at 34 to 36 weeks, and 858,406 at 37 weeks or later). The proportions of infants who survived and were followed to adult life were 17.8%, 57.3%, 85.7%, 94.6%, and 96.5%, respectively. Among the survivors, the prevalence of having cerebral palsy was 0.1% for those born at term versus 9.1% for those born at 23 to 27 weeks of gestation (relative risk for birth at 23 to 27 weeks of gestation, 78.9; 95% confidence interval [CI], 56.5 to 110.0); the prevalence of having mental retardation, 0.4% versus 4.4% (relative risk, 10.3; 95% CI, 6.2 to 17.2); and the prevalence of receiving a disability pension, 1.7% versus 10.6% (relative risk, 7.5; 95% CI, 5.5 to 10.0). Among those who did not have medical disabilities, the gestational age at birth was associated with the education level attained, income, receipt of Social Security benefits, and the establishment of a family, but not with rates of unemployment or criminal activity. **CONCLUSIONS:** In this cohort of people in Norway who were born between 1967 and 1983, the risks of medical and social disabilities in adulthood increased with decreasing gestational age at birth. 2008 Massachusetts Medical Society

Publication Types:
Research Support, Non-U.S. Gov't

PMID: 18635431 [PubMed - in process]

3: Hum Mol Genet. 2008 Apr 15;17(R1):R76-83.

Stem cell-based strategies for treating pediatric disorders of myelin.

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The pediatric leukodystrophies comprise a category of disease manifested by neonatal or childhood deficiencies in myelin production or maintenance; these may be due to hereditary defects in one or more genes critical to the initiation of myelination, as in Pelizaeus-Merzbacher Disease, or to enzymatic deficiencies with aberrant substrate accumulation-related dysfunction, as in the lysosomal storage disorders. Despite differences in both phenotype and natural history, these disorders are all essentially manifested by a profound deterioration in neurological function with age. A congenital deficit in forebrain myelination is also noted in children with the periventricular leukomalacia of cerebral palsy, another major source of neurological morbidity. In light of the wide range of disorders to which congenital hypomyelination and/or postnatal demyelination may contribute, and the relative homogeneity of central oligodendrocytes and their progenitors, the pediatric leukodystrophies may be especially attractive targets for cell-based therapeutic strategies. As a result, glial progenitor cells (GPCs), which can give rise to new myelinogenic oligodendrocytes, have become of great interest as potential therapeutic vectors for the restoration of myelin to the hypomyelinated or dysmyelinated childhood CNS. In addition, by distributing themselves throughout the deficient host neuraxis after perinatal allograft, and giving rise to astrocytes as well as oligodendrocytes, glial progenitors appear to be of potential great utility in rectifying enzymatic deficiencies. In this review, we focus on current efforts to develop the use of isolated human GPCs as transplantable agents both for mediating enzymatic restoration to the enzyme-deficient brain and for therapeutic myelination in the disorders of congenital hypomyelination.

Publication Types:
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Research Support, Non-U.S. Gov't

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4: Acta Bioeng Biomech. 2008;10(1):37-42.

Gait characteristics following Achilles tendon elongation: the foot rocker perspective.

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The action of three functional rockers, namely the heel, ankle and forefoot rocker, assist the progression of the leg over the supporting foot. The purpose of this case series was to analyze the occurrence of foot rockers during gait in three children with cerebral palsy (CP) who had undergone the tendo-Achilles lengthening (TAL), procedure followed by a clinic- or home-based intervention and in one child with CP without history of surgery. Self-selected gait was video-recorded in a laboratory during six testing sessions at half-year intervals rendering a 3 year period of observation. One child had pre- and post-surgical gait data and the other two had post surgical data only. Sagittal plane knee angular velocity, as well as foot to ground positions, and foot rocker occurrence were analyzed. In a child with history of CP, and without history of surgery, mean angular velocities of the 1st, 2nd and 3rd foot rocker were 3.7, 0.57 and 6.67 rad/s, respectively, and the step length and cadence were normal. In children who underwent TAL the 1st and 2nd rocker was absent, as the initial contact of the foot with the ground was either with foot-flat or forefoot. The mean velocity of the 3rd rocker in children who underwent TAL was lower by approximately 50-80% than that of the nonsurgical case. Furthermore, the characteristic pattern of the knee joint to foot-floor position during gait was not observed in these cases. Foot rocker analysis identified children with abnormal gait characteristics. Following surgery these gait characteristics remained abnormal.

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