Title des Beitrags:
Growth Patterns in the First Three Years of Life in Children with Classical Congenital Adrenal Hyperplasia Diagnosed by Newborn Screening and Treated with Low Doses of Hydrocortisone

Abstract:
Background: Linear growth is the best clinical parameter for monitoring metabolic control in classical congenital adrenal hyperplasia (CAH). Objective: To analyze growth patterns in children with CAH diagnosed by newborn screening and treated with relatively low doses of hydrocortisone during the first year of life. Patients and Methods: 51 patients (27 females) were diagnosed with classical CAH by newborn screening. All patients were treated with relatively low doses of hydrocortisone (9–15 mg/m2 body surface area). 47 patients were additionally treated with fludrocortisone. Results: At birth, height SDS (H-SDS) was 1.1 ± 1 in girls and 0.9 ± 1.5 in boys. After 3 months, H-SDS decreased to 0.4 ± 0.9 in girls and to 0.1 ± 1.3 in boys. Over the 3-year period, H-SDS further decreased to –0.4 ± 1.8 in girls and to –0.8 ± 1 in boys and approached the genetic height potential (target H-SDS of girls –0.5 ± 0.3 and target H-SDS of boys –0.9 ± 0.7). During the first 9 months of age, growth velocity was slightly decreased in girls (18.2 ± 1.9 cm) and boys (17.3 ± 1.6 cm) when compared to a healthy reference population (girls 19.0 ± 3.9 cm and boys 18.7 ± 4.7 cm). At the age of 3 years, bone age was appropriate for chronological age in both girls (2.7 ± 0.5 years) and boys (2.9 ± 0.5 years). Conclusion: Birth length is above average in children with classical CAH, which might be the result of untreated
hyperandrogenism in utero. With relatively low doses of hydrocortisone treatment, growth velocity decreases slightly during the first 9 months and H-SDS then approaches the genetic height potential.

Stichworte: Congenital adrenal hyperplasia; Newborn screening; Growth; Glucocorticoids

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