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Long-term anthropometric outcome of girls with non-classical congenital adrenal hyperplasia diagnosed in childhood

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Objective

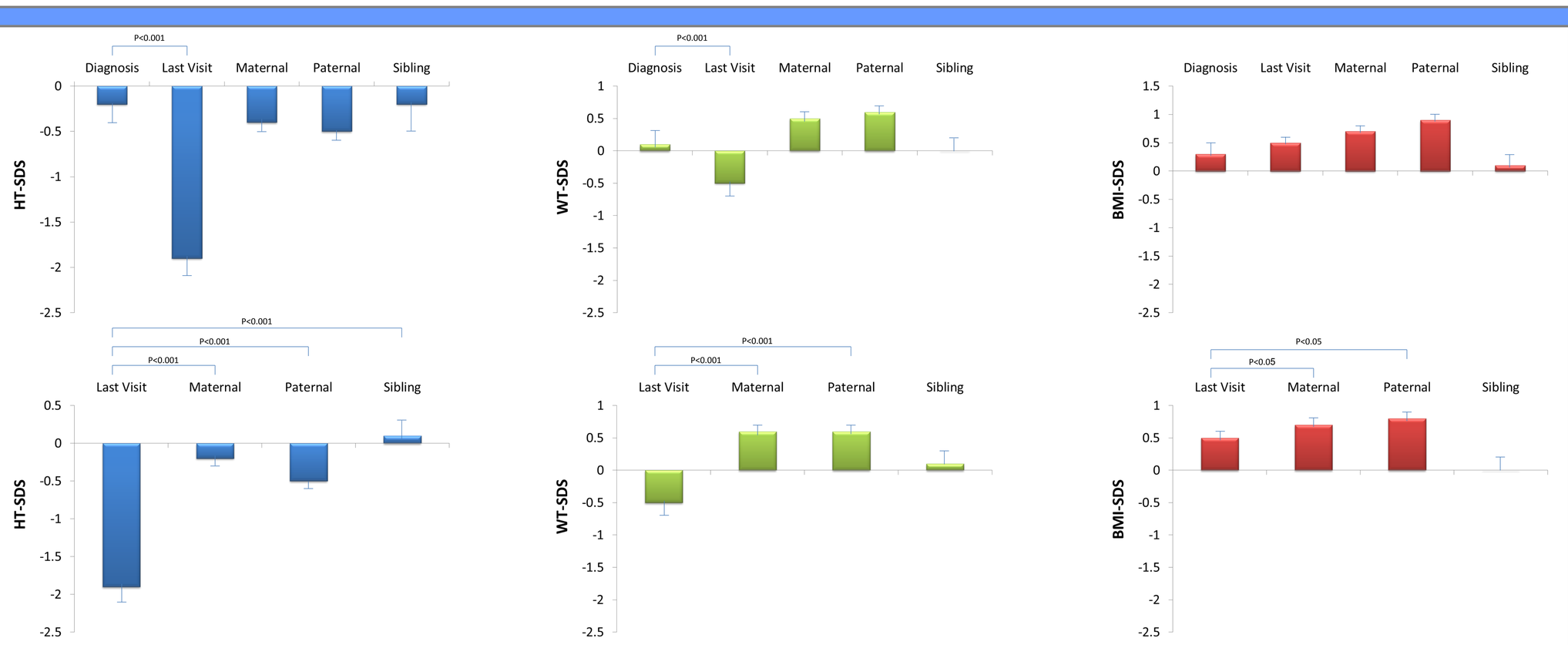
- To investigate long-term effects of NCCAH on height and weight.

Methods

- Retrospective, cross-sectional study.
- 105 girls diagnosed with NCCAH (stimulated 17-hydroxyprogesterone ≥ 45nmol/l).
- Height-, weight- and BMI-SDS at diagnosis were compared to last visit and to those of their mothers, fathers and siblings.
- Stratification by pubertal stage at diagnosis: prepubertal, pubertal (tanner 2-4) and fully pubertal.

Height-, weight- and BMI-SDS (±SEM)at diagnosis compared to last visit, parental & siblings

Height-, weight- and BMI-SDS (±SEM) at last visit compared to parental & siblings



Results

- Age at diagnosis - 8.4±4.1 years (0.4-18). Mean follow-up -11.4±7.5 years.
- At diagnosis, height- , weight- and BMI-SDS were similar to those of parents and siblings.
- HT-SDS at last visit was significantly lower than that at diagnosis (-1.7±1.4 vs. -0.2±1.3, P<0.001) and lower than mothers (P<0.001), fathers (P<0.001) and sibs (P<0.001).
- Patients that were fully pubertal at diagnosis were significantly shorter than prepubertal and pubertal patients at admission, and shorter compared to prepubertal, at last visit.
- HT-SDS at last visit was negatively correlated with treatment duration (r= -0.46, P<0.001) but not with hydrocortisone dose (r=-0.22, P=0.07).
- Current weight-SDS slightly decreased compared to baseline , while BMI-SDS was similar to baseline.
- Most recent weight-and BMI-SDS were significantly lower than parental weight-and BMI-SDS.

Conclusions

- NCCAH diagnosed in childhood is associated with compromised height.
- Longer steroid treatment duration and older age at diagnosis may be risk factors.
- The finding that BMI-SDS did not increase over time, despite hydrocortisone treatment, is encouraging.

Authors have nothing to disclose.

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