**INTRODUCTION**

Final height in CAH patients is generally assumed to be lower than the population norm. Besides CAH subtype and age at diagnosis, timing of pubertal development is considered to have a significant impact on final height. In most CAH patients, puberty starts within normal ranges, although at a somewhat earlier mean age compared to reference populations. CAH complicating gonadotropin-dependent precocious puberty has been reported in few cases, especially in conditions of late CAH-diagnosis and treatment initiation, and often requires additional treatment with GnRH-analogues.

**PATIENTS & METHODS**

We retrospectively assessed frequency, clinical parameters and height outcome of GnRH-analogue treated CAH-patients from the German CAH registry (DGKED-QS/AGS), comprising longitudinal data of a total of >1500 CAH-patients.

**RESULTS**

- The majority of 64 GnRH-analogue-treated patients were born in the pre-newborn screening era (Fig. 1).
- Mean age of CAH-diagnosis decreased over time, even within the pre-newborn screening era (Fig. 2, dotted lines).
- Only one third (37.5 %) of them suffered from salt-wasting CAH (Fig. 3).
- Mean age of first database entry of GnRH-analogue treatment was 8.81 /9.24 yrs (girls /boys), with a significant decline from the 1980s to the 2000s (Fig. 2).
- Some children without clinical signs of gonadarche received GnRH-analogue treatment, (presumably) solely initiated for auxological reasons (Fig. 4).
- Mean height-SDS at GnRH-analogue treatment start was +1.18 SDS (+1.74 SDS TH-corr.) in girls /+ 0.62 (+1.13) SDS in boys, with accelerated bone age (+3.29 /+3.35 yrs) in both genders. At transition, girls reached a normal final height (-0.15 SDS, TH-corr.), while most boys remained subnormal (Fig. 5).

**CONCLUSIONS**

- GnRH-analogue treatment in children with CAH is rare, especially in the 17-OHP newborn screening era.
- A decline of mean age at CAH-diagnosis paralleled by decreasing use of GnRH-analogue treatment in recent decades supports the concept that chronic hyperandrogenemia (or its cessation) can trigger central precocious puberty.
- The auxological data of this cohort analysis seems to indicate that GnRH-analogue treatment may have a beneficial effect on final height, especially in girls.