

LANGUAGE DEVELOPMENT PROPERTIES OF AN INDIVIDUAL WITH CONGENITAL ADRENAL HYPERPLASIA: A CASE STUDY

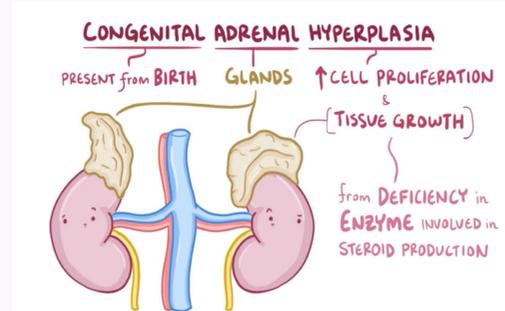
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Congenital adrenal hyperplasia (CAH) is related to a deficient cortisol synthesis in the adrenal cortex. It is an autosomal recessive disease group that develops due to the deficiency of one of the enzymes. Most common type is 21-hydroxylase deficiency. The clinical picture is quite variable.(1). There is an excess of androgens with cortisol deficiency, aldosterone deficiency may accompany. The factor that determines the diversity of the clinical picture is the degree of enzyme deficiency (2). Plante et al. (2008) reported that increasing the levels of testosterone in individuals with CAH may change prenatal brain development and cause special learning difficulties, and their findings indicate that language-based learning difficulties may arise (3).



PURPOSE

No study has been conducted in the literature about the Turkish language characteristics of individuals with congenital adrenal hyperplasia. The purpose of this study is to examine the language characteristics of a 2-year-old individual we have seen at our clinic.

CASE DESCRIPTION

- 2-year-old male with Congenital Adrenal Hyperplasia
- The client sought evaluation at Medipol University Language, Speech and Swallowing Therapy Application Center (MEDKOM) for «language delay».
- The mother's age at conception is 29.
- The pregnancy term was within normal limits (38-40 weeks).
- The client was delivered vaginally; the birth process was long.
- Neonatal hearing screening results are normal.
- The family consulted the pediatric endocrinology department with the complaint of faster than normal growth when client was 1;8 years old and the client was diagnosed with CAH.

Test Name	Results	Unit	Reference Value
IGF-1	137	ng/mL	15 - 189
Androstenodion	18,7	ng/mL	0.03 - 0.15
11-Beta Deoksikortizol	181,73	ng/mL	0.07 - 2.02
17 OH – Progesteron	1,66	ng/mL	0.03 - 2.28
ACTH	1054	pg/mL	<46

Table1. The blood test results

METHOD

In the assessment, both informal and formal tools were used to obtain speech and language data as well as information on the developmental stages. Among the standard tests, TEDİL, Turkish version of TELD-3 (Test of early language development), TIGE (Turkish Communication Behavior Development Inventory) and AGTE (Ankara Development Screening Inventory) were used. TEDİL is the main language test used to evaluate the child's expressive and receptive language skills.

TIGE evaluates the total communicational output of the child. AGTE evaluates the developmental level in various domains. Pediatric Family Interview Form was filled. Spontaneous language sample was also collected.

Through 15 SLT sessions, the language development of the client was supported and improvement in communication was observed. The environment is structured using the client's already existing verbal outputs as basis to increase interaction. The main goal of the intervention was to increase verbal output through provision of language input slightly above the level client per the Zone of Proximal Development-ZDP theory. The parents have been taught strategies that they can implement at home to support the child's language development.

RESULTS

	Assessment Result				
TELD	Expressive Language Standard Score: 71 Equivalent age : < 1;4		Receptive Language Standard Score: 100 Equivalent age : 2;2		
TİGE-2	Total score: 32				
AGTE	Language- Cognition Raw Score: 33	Fine Motor Skills Raw Score: 16	Gross Motor Skills Raw Score: 23	Social Skills Raw Score: 29	Total Raw Score: 101

Table2. Assessment Results

The TEDİL receptive language standard score is 100 and the expressive language standard score is 71. The receptive language equivalent age is 2;2 yet expressive language equivalent age is under 2 years old. As for AGTE, all skills except gross motor skills were found to be below expected standards.

Stress levels of the client, which were connected to hormonal changes had an impact on language skills and performance of the child. The results indicate that language scores of the client improved with the help of speech therapy and parent-child interaction support. It is crucial to address special developmental needs of each client. The language skills and development of this population need to be addressed and investigated in more detail with more cases.

References:

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