Wolcott-Rallison Syndrome

Fatih Gürbüz[1], Bilgin Yüksel[2], Ali Kemal Topaloğlu[2]

[1]Ankara Pediatric Hematology and Oncology Research and Training Hospital, Clinic of Pediatric Endocrinology, Ankara, Turkey

[2]Çukurova University Faculty of Medicine, Department of Pediatric Endocrinology, Adana, Turkey

Wolcott-Rallison syndrome (WRS) is a rare autosomal recessive disorder characterized by early-infancy onset neonatal diabetes mellitus, epiphyseal dysplasia, and other multisystemic clinical manifestations. Mutations in the eukaryotic translation initiation factor 2α kinase (*EIF2AK3*) gene are responsible for this disorder. Here, we described a girl with neonatal diabetes diagnosed at 4 months of age, who developed severe growth retardation with epiphyseal dysplasia during the follow-up period. A clinical diagnosis of WRS was confirmed by the identification of a novel homozygous nonsense mutation (p.Q333*) in exon 5 of the *EIF2AK3* gene in the consanguineous family. The clinical phenotype associated with the syndrome can be variable, but a combination of infancy-onset diabetes mellitus, multiple epiphyseal dysplasia, and hepatic and/or renal failure is the basis of diagnosis.

Key words: Wolcott-Rallison syndrome, neonatal diabetes mellitus, epiphyseal dysplasia, *EIF2AK3*, mutation

Complete Androgen Insensitivity Syndrome; the Importance of Family Screening

Ruken Yıldırım[1], Yusuf Kenan Haspolat[1], Didem Helvacıoğlu[2]

[1]Dicle University Faculty of Medicine, Department of Pediatric Endocrinology, Diyarbakır, Turkey

[2]Marmara University Faculty of Medicine Göztepe Education and Research Hospital, Clinic of Pediatric Endocrinology, İstanbul, Turkey

Objective: Androgen insensitivity syndrome was first described in 1953 by Morris. Basic pathology is end-organ insensitivity to androgen stimulus. X-linked disease is characterized by variable defects in virilization in 46,XY individuals. Phenotypes include from male infertility to completely normal female external genitalia. Family screening was performed in our newly diagnosed patient with androgen insensitivity syndrome as well as in the patient's three brothers, two cousins, and aunts who were suspected of having androgen insensitivity syndrome. We aimed to emphasize the importance of family screening in this study.

Case: A 16-year-old girl was admitted to our clinic with the symptom of amenorrhea. Her growth rate was normal. Her height was 163 cm (3rd-10th percentiles) and body weight was 46 kg (50th-75th percentiles), her thelarche was Tanner stage 4 and pubarche was Tanner stage 1. Her external genitalia were normal female; there was consanguinity between the parents. Her medical history included an operation for inguinal hernia. Laboratory findings included serum total testosterone level of 5.2 ng/mL, estradiol 22.5 pg/mL, dihydrotestosterone 42 pg/mL, follicle-stimulating hormone and luteinizing hormone values were 5.1 and 20.6 mIU/mL, respectively. Pelvic ultrasonography and pelvic magnetic resonance imaging revealed absent uterus and ovaries. Chromosome karyotype analysis was 46,XY and sex-determining factor was positive. Our patient was considered to have complete androgen insensitivity syndrome and genetic testing was planned. Our patient was operated at another center; testicular tissue was removed and estrogen treatment was started. The family of our patient was screened for complete androgen insensitivity syndrome. We scanned tree pre-pubertal brothers, two pre-pubertal cousins, and one pubertal aunt. We found the same ultrasonographic findings and the same chromosomal analysis. We think that according to these results they also have complete androgen insensitivity syndrome.

Conclusion: This case is presented to draw attention to the need for complete androgen insensitivity syndrome screening in cases with family history.

Key words: Androgen insensitivity syndrome, family screening