(P-19)

A Novel Mutation in a Patient with 5-α Reductase Deficiency Reared as Girl

Hüseyin Anıl Korkmaz[1], Hüseyin Onay[2], Ferda Özkınay[2]

[1]Balıkesir Atatürk State Hospital, Clinic of Pediatric Endocrinology, Balıkesir, Turkey

[2]Ege University Faculty of Medicine, Department of Medical Genetics, İzmir, Turkey

5-α reductase deficiency is one of 46,XY disorders of sexual differentiation characterized by androgen metabolism disorder. In the literature, there are few cases with 5-α reductase deficiency reared as girl.

A 12-year and 8-month-old female patient presented with primary amenorrhea, absent breast development, axillary and pubic hair. Physical examination revealed a weight of 53.9 kg [75-90p, 0.87 standard deviation score (SDS)], a height of 167 cm (95p, 1.72 SDS), and normal vital signs. Genital examination disclosed female external genitalia with no cliteromegaly, hirsutism, or acne. The target height was 160.2 cm, and bone age revealed 12 years.

Follicle-stimulating hormone, luteinizing hormone, estradiol, and total testosterone levels were 3.68 mIU/mL, 3.04 mIU/mL, < 10 pg/mL, and 202.76 ng/mL. Adrenocorticotropic hormone and serum cortisol levels were normal in terms of adrenal insufficiency. Ultrasound imaging revealed no uterus and ovary. Karyotype analysis revealed 46,XY and SRY + was detected by quantitative fluorescent polymerase chain reaction. 5-α reductase deficiency was diagnosed with homozygous IVS3 + 1G > T (c.547 + 1G > T) mutation. Prophylactic bilateral gonadectomy was planned.

We emphasize the importance of karyotype analysis in patients with delayed puberty and primary amenorrhea. Prophylactic bilateral gonadectomy should be kept in mind for 5-α reductase deficiency in patients reared as girl to prevent the development of gonadal malignancy.

(P-20)

Two Cases of Klinefelter Syndrome

Hatice Özışık[1], Banu Şarer Yürekli[1], Nilüfer Özdemir Kutbay[2], Hüseyin Onay[3], Mehmet Erdoğan[1], Şevki Çetinkalp[1], Gökhan Özgen[1], Füsun Saygılı[1]

[1]Ege University Faculty of Medicine, Department of Endocrinology and Metabolism Diseases, İzmir, Turkey

[2]Gazi Yaşargil Training and Research Hospital, Clinic of Endocrinology, Diyarbakır, Turkey

[3]Ege University Faculty of Medicine, Department of Medical Genetics, İzmir, Turkey

Klinefelter syndrome is the most commonly seen sex chromosomal disorder in males. The typical clinical features of this syndrome are symptoms of hypogonadism in different degrees. Up to 80% of patients with Klinefelter syndrome have 47,XXY karyotype, which is the prevalent type.

Case 1: A 36-year-old male patient applied to our clinic due to the complaint of erectile dysfunction. On physical examination, height was 183 cm, weight 80 kg, and BMI was 23.9 kg/m^2. Axillary and pubic hair were present. He had bilateral gynecomastia. Testis volume measured with orchidometer was 20 mL. Karyotype was 47,XXY. In the laboratory examination, follicle-stimulating hormone was 36 mIU/mL (1.27-19.26), luteinizing hormone (LH) 25 mIU/mL (1.24-8.62), and total testosterone was 2.15 ng/mL (2.8-8). Spermiogram demonstrated azoospermia. Intramuscular testosterone treatment was initiated once in three weeks.

Case 2: A 43-year-old male patient applied to our clinic due to the complaints of libido loss and infertility. On physical examination, height was 185, weight was 95 kg, BMI was 27.8 kg/m^2, axillary and pubic hair were present, the penis was small, and he had truncal obesity. Karyotype was 47,XXY. Follicle-stimulating hormone was 61 mIU/mL (1.27-19.26), LH 25 mIU/mL (1.24-8.62), total testosterone 0.24 ng/mL (2.8-8), and free testosterone was 3.15 pg/mL (57-178). In bone densitometry, L1-4 Z was -3.5. Intramuscular testosterone treatment was initiated once in three weeks.

In Klinefelter syndrome, testosterone replacement treatment eliminates all negative effects related to androgen deficiency; however, it has no effect on fertility. It should be remembered that Klinefelter syndrome may be detected in infertile males.

(P-21)

Major Depression and Fabry Disease: A Case Report

Zeynel Abidin Sayıner, Ayten Eraydın, Suzan Tabur, Mesut Özkaya, Ersin Akarsu, Mustafa Araz

Gaziantep University Faculty of Medicine, Department of Endocrinology and Metabolism, Gaziantep, Turkey

Fabry disease is a genetic lysosomal storage disease which affects several organs. The main defect is absence of alpha galactosidase enzyme activity. Kidney, central nervous system, cardiovascular system, and ocular system are the main influenced systems, but neuropsychiatric symptoms may develop in some cases. Current studies showed that psychiatric symptoms may be seen in both genders apart from neurological ones.

A 22-year-old female patient with history of two suicide attempts was consulted from psychiatry clinic. Her father had Fabry disease. He had renal transplantation and his enzyme level is low 3.2 nmol/mg/h (normal range > 30). GLA gene mutation analysis revealed that he had p.G261D (c.782G > A) heterozygote mutation. Enzyme replacement treatment was administered

(agalsidase alfa). His daughter had flushing in her face and she could not sweat. Plenty angiokeratoma were found on her body. Eye examination was normal and there was no cardiac pathology. The same mutation was detected. Enzyme replacement therapy has been started.

Despite the fact that Fabry disease is an X-linked disorder, several female heterozygote mutation carriers have distinct clinical symptoms. Our patient does not have any major characteristics of Fabry disease, but she presented with major depression and angiokeratoma besides she had heterozygote mutation. In the literature, few mutation cases especially in men were associated with depression; however, no data found for women. It is well-known that mutation and phenotype relation is very important to predict the prognosis of the illness. It should be kept in mind that heterozygote mutation of p.G261D (c.782G > A) may be related with depression with female patients.

(P-22)

A Case of MEN 2A: D631Y Mutation

Banu Şarer Yürekli[1], Hatice Özışık[1], Nilüfer Özdemir Kutbay[1], Hüseyin Onay[2], Gökhan Özgen[1]

[1]Ege University Faculty of Medicine, Department of Endocrinology and Metabolism Diseases, İzmir, Turkey

[2]Ege University Faculty of Medicine, Department of Medical Genetics, İzmir, Turkey

Multiple endocrine neoplasia 2A (MEN 2A) is a hereditary disease comprising medullary thyroid carcinoma (MTC) (95%), pheochromocytoma (50%), parathyroid hyperplasia or adenoma (15-30%). RET mutations are seen generally in exon 10. Exon 11, 631 codon mutations are not common in MEN.

A 29-year-old male patient applied to our clinic. His mother was operated and diagnosed with MTC. Heterozygous D631Y RET mutation was detected in his mother. After this result, our patient was evaluated for RET mutation and MEN. Calcitonin value of the patient was normal and no nodule was detected on thyroid ultrasound. RET oncogene was positive for our patient as D631Y mutation. For the screening of MEN components, twenty-four hour urinary metanephrine and normetanephrine were high. Magnetic resonance imaging revealed adrenal adenoma 29x27x31 mm in diameter at the left adrenal. The patient underwent an operation in 2014 and pathology was consistent with pheochromocytoma. Prophylactic thyroidectomy was recommended, however, the patient did not accept this. He has been followed for development of thyroid nodule and evaluation of calcitonin level. At last visit, laboratory examination revealed PTH of 31.3 pg/mL (15-65), Ca 10.2 mg/dL (8.6-10.2), TSH 3.98 µIU/mL (0.35-5.50), fT_4 1.47 ng/dL (0.89-1.76), calcitonin 5.77 pg/mL (0-10), and 24-hour urinary metanephrine and normetanephrine were normal.

RET 631 codon mutation is seen rarely in MEN patients. This genetic profile might be related to the less vigorous clinical disease behavior and the late onset of MTC.

Pheochromocytoma might be the first manifestation prior to the development of MTC.

(P-23)

A Case of Androgen Insensitivity Syndrome Presenting with Micropenis

Hüseyin Anıl Korkmaz

Balıkesir Atatürk State Hospital, Clinic of Pediatric Endocrinology, Balıkesir, Turkey

The patients with androgen insensitivity syndrome can present with various phenotypic anomalies having as a common aspect the loss of reproductive characteristics.

A boy from non-consanguineous family was admitted to pediatric endocrine department because of micropenis. A 7-year and 8-month-old boy was born with 3650 g by caesarean section. On physical examination, height was 124.1 cm (25-50p), height SDS -0.27, weight 29.7 kg (75-90p), and weight SDS was 1.09. The patient was conscious, oriented, and well-nourished with normal secondary sexual characteristics for his age. Genital examination revealed a stretched penile length of 3 cm, penile width of 0.5 cm, and no axillary and pubic hair. Right and left testis were palpated in the scrotal sac.

Karyotyping revealed a normal 46,XY karyotype. Serum follicle-stimulating hormone, luteinizing hormone, and total testosterone levels were 0.79 mIU/mL (normal reference range < 6.7), 0.06 mIU/mL (normal reference range 0.3-6.0), and 4.80 ng/dL (normal reference range < 7), respectively. Serum testosterone level was increased in response to 1500 units/dose HCG stimulation test for 3 days. No mutation was found for 5-α reductase deficiency. Androgen insensitivity syndrome was diagnosed with hemizygote p.L863F (c.2587C > T) mutation.

We emphasize the importance of genetic analysis in patients with micropenis. Routine genetic analysis to confirm androgen insensitivity syndrome may predict the long-term prognosis and management.