A nine year old boy presented with the appearance of secondary sexual characteristics since two years. He was 149 cms tall (SDS=2.3) and weighed 40 kg (SDS=1.4). On examination, he had a stocky and muscular built. On genitai examination he had an adult Sexual Maturity Rating (SMR) and a right testicular firm, oval, well circumscribed, non tender mass measuring 4 cm x 5 cm. The left testis measured 3 ml. Family history of precocious puberty was negative. Endocrine evaluation revealed suppressed gonadotropins and elevated testosterone [Follicle stimulating hormone - 1.2 mIU /ml (1-7 mIU/m), Luteinizing hormone (LH)-1.6 mIU /mL (1.6-5.7 mIU/mL), testosterone - 10.3ng/mL (2.3-8.65 ng/mL)]. A Gonadotropin Releasing Hormone (GnRH) stimulation test confirmed gonadotropin independent precocious puberty. Clinical examination, hormonal analysis (17-hydroxyprogesterone and cortisol), and ultrasound examination of the adrenals showed no evidence of congenital adrenal hyperplasia. Tumour markers in form of lactate dehydrogenase, β-Human Chorionic Gonadotropin (HCG) and alpha-fetoprotein were normal. In boys with familial male-limited precocious puberty, the diagnosis is confirmed by the presence of Reinke crystals or nuclear inclusions. Histopathology confirms the diagnosis. Histologically LCT is characterized by Reinke crystals or nuclear inclusions. Patients with malignant tumors require regular follow-up. Asymptomatic lesions may be treated with laparoscopic surgery. Observation is sufficient in patients in whom a benign Leydig cell tumour is not comprehensively understood. However, the surgical management of patients with LCT requires the diagnosis of Leydig cell tumour (LCT) is the most frequent interstitial neoplasms of the testis, accounting for 0.8-3% of all testicular tumors and 4-9% of tumors of the testis in prepubertal males. (6-8) Though they may be seen at any age, there are two major peaks; prepubertal boys and adult in their 30s-40s. The aetiology of this tumour is not comprehensively understood. However, the disruption of the hypothalamic-pituitary-testicular axis seems to lead to excessive stimulation of Leydig cells by increased LH production. (6) Thus, LCTs are often associated with an excess of sex steroid production, although clinical symptoms of endocrine disturbances are not always reported. (6) Classically, LCT clinically presents with testicular mass (90%), precocious puberty (10%) (sudden external genital development, pubic hair growth, accelerated skeletal and muscle development, and mature masculine voice), pain and feminizing symptoms (gynecomastia, breast tenderness). Exceptionally, diagnosis is made by an incidental finding. (9) Endocrine evaluation and imaging methods are required to reach a diagnosis. Histopathology confirms the diagnosis. Histologically LCT is characterized by Reinke crystals or nuclear inclusions. Patients with malignant tumors require regular follow-up. Asymptomatic lesions may be treated with laparoscopic surgery. Observation is sufficient in patients in whom a benign Leydig cell tumour is not comprehensively understood. However, the surgical management of patients with LCT requires the diagnosis of Leydig cell tumour (LCT) is the most frequent interstitial neoplasms of the testis, accounting for 0.8-3% of all testicular tumors and 4-9% of tumors of the testis in prepubertal males. (6-8) Though they may be seen at any age, there are two major peaks; prepubertal boys and adult in their 30s-40s. The aetiology of this tumour is not comprehensively understood. However, the disruption of the hypothalamic-pituitary-testicular axis seems to lead to excessive stimulation of Leydig cells by increased LH production. (6) Thus, LCTs are often associated with an excess of sex steroid production, although clinical symptoms of endocrine disturbances are not always reported. (6) Classically, LCT clinically presents with testicular mass (90%), precocious puberty (10%) (sudden external genital development, pubic hair growth, accelerated skeletal and muscle development, and mature masculine voice), pain and feminizing symptoms (gynecomastia, breast tenderness). Exceptionally, diagnosis is made by an incidental finding. (9) Endocrine evaluation and imaging methods are required to reach a diagnosis. Histopathology confirms the diagnosis. Histologically LCT is characterized by Reinke crystals or nuclear inclusions.

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