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A rare case report: testicular leydig cell tumor with gynecomastia

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CASE REPORT

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ABSTRACT

Gynecomastia is the most common definition of breast tissue growth. It is common in urology due to androgen blockage used in prostate cancers. Clinically insignificant gynecomastia is present in 50% of men and there is no proliferation of breast tissue in ductus epithelium. Gynecomastia is rarely seen in primary testicular tumors such as Leydig Cell Tumors (LCT). Leydig Cell Tumors are one of the rare sex cord stromal cell tumors of the testis. Although it is usually with endocrine changes, it is a painless mass or incidentally occurring tumor in the testis. In this case report, we examined a 43-year-old left testicular Leydig cell tumor followed up with gynecomastia. He had been admitted to our clinic for gynecomastia and breast pain for 6 years. The patient was followed-up by endocrinology due to the aforementioned complaints. Pituitary MRI was performed with the suspicion of prolactinoma, but no pathology was found. Since the physical examination was unremarkable, MRI of the lower abdomen was requested from the patient. MRI reported as 20*20 mm in size (testicular tumor?) in the left intratesticular area. The patient underwent left inguinal orchiectomy and the pathology report was positive for the leydig cell tumor. 30% of patients with Leydig cell tumors present with gynecomastia. Ultrasonography is accepted as the first research method for the diagnosis of leydic cell tumor, but MRI is superior to ultrasonography in diagnosis. The gold standard treatment option is radical inguinal orchiectomy. The mechanism of hormonal disorders may be an overproduction of testosterone and estrogens by the tumor. As in our case, it is necessary to consider the possibility of LCT which is rarely seen in patients with gynecomastia and to provide differential diagnosis by performing the tests in this direction.

Keywords: gynecomastia, leydig cell tumor, testis tumor

INTRODUCTION

Gynecomastia is the most common definition of breast tissue growth. It is common in urology due to androgen blockage used in prostate cancers. Clinically insignificant gynecomastia is present in 50% of men and there is no proliferation of breast tissue in ductus epithelium (1). The principle of separating real gynecomastia from weight-dependent gynecomastia is tissue proliferation. There is a balance between estrogen and androgen in the development of breast tissue. Androgen degradation, such as hypogonadism, increased estrogen, such as in germ cell tumors, increases in aromatase activity, such as in Klinifelter syndrome, cause gynecomastia. Gynecomastia is rarely seen in primary testicular tumors such as Leydig Cell Tumors (LCT). LCT is one of the rare sex cord stromal cell tumors of the testis (2-3). Although it is usually with endocryne changes, it is a painless mass or incidentally occurring tumor in the testis (2). It is mostly benign, malignancy rates increase especially in older ages (4). In this case report, we examined the left testis leydig cell tumor followed by gynecomastia at the age of 43 years.

CASE REPORT

A 43-year-old male patient. He had been admitted to our clinic for gynecomastia and breast pain for 6 years (Figure 1.). The patient was followed-up by endocrinology due to the aforementioned complaints. The patient was suspected of

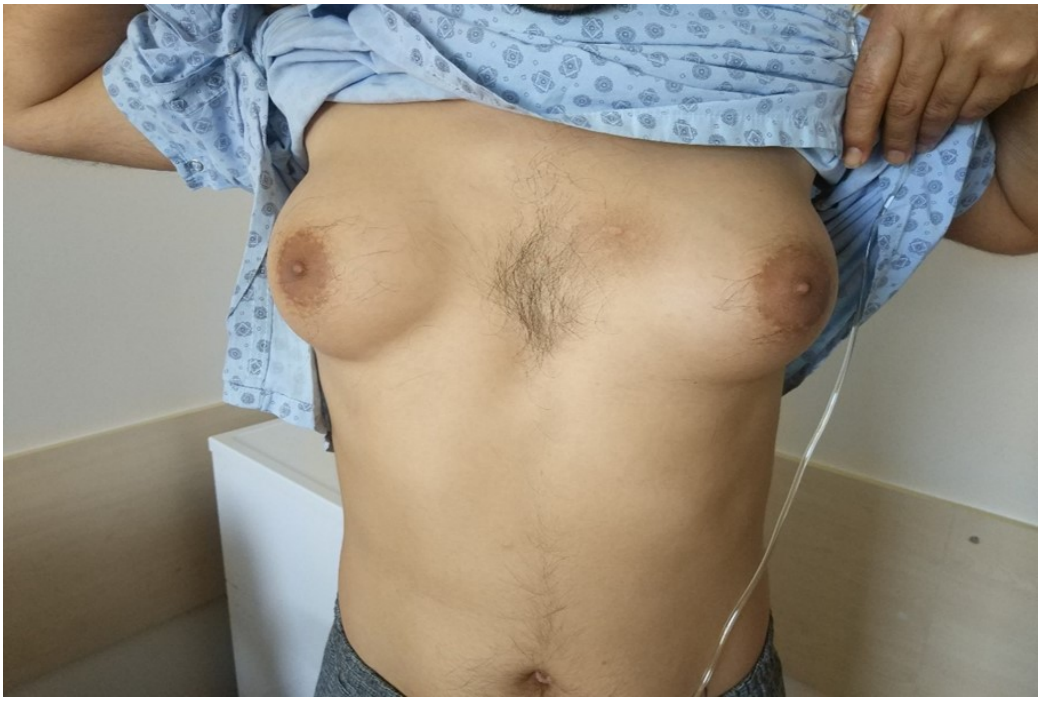

Figure 1. The appearance of gynecomastia

prolactinoma. Pituitary MRI was performed with the suspicion of prolactinoma, but no pathology was found. The patient's hormonal levels, Estridiol 78 pg/dl, total testosterone 1 ng/dl, FSH 9 mg/dl, were applied to us with a report of a solitary lesion in the left testis of 19*19 mm in external scrotal ultrasonography. Since the physical examination was unremarkable, MRI of the lower abdomen was requested from the patient. MRI reported as 20*20 mm in size (testicular tumor?) in the left intratesticular area. The patient underwent left inguinal orchiectomy and the pathology report was positive for LCT and surgical magrin was negative. Postoperatively, the patient had a total testosterone of 68 ng /dl of estradiol 17 pg /dl on the first day. At this stage, the patient was followed by medical oncology. In the postoperative first month, the total testosterone was 268 ng / dl in gynecomastia and pain was found to be regressed.

CONCLUSION

LCT is the most common spermaticcord / stromaltumor (5). It constitutes 1-3% of testicular neoplasms and occurs in all age groups (3). Approximately 25% are seen in children, but most are seen in adults aged 20-60 (peak: 30-35) (5). About 30% of patients present with gynecomastia. Ultrasonography is considered as the first research method for the diagnosis of LCT, but MRI is superior to ultrasonography in the diagnosis (6). The gold standard treatment option is radical inguinal orchiectomy (4).

According to the study by Efthimiou et al., 480 LCT cases were reported in the English literature and 29.2% of them were presented with testicular mass and 12.5% with gynecomastia. The common feature of these cases is; The changes caused by Leydig cell tumor in cryptoorchidism patients were investigated (6). In our case, cryptoorchidism was not present and our patient was older than the patient population in the study. The mechanism of hormonal disorders may be an over production of testosterone and estrogens by the tumor (7).

In our case, we discussed the management of the tumor, which was detected by USG and MRI,

although there was no palpable mass in the physical examination of the patient who presented with gynecomastia. The coexistence of gynecomastia finding and testicular tumor is rare. As in this case, it is necessary to consider the possibility of LCT which is rarely seen in patients with gynecomastia and to provided differential diagnosis by performing the testis in this direction.

REFERENCES

1. Philip Zeuschner , 1 Christian Veith,2 Johannes Linxweiler,1 Michael Stöckle, and Julia Heinzelbecker case report : Two years of gynecomastıa by Leydıng Cell Tumor

2. De Groot LJ, Chrousos G, Dungan K, et al. editors.South Dartmout(MA): MDText.com, Inc.; 2000

3. Doç Dr. Orhan Koca ,Türk Üroloji Derneği ,Türk Üroloji Akademisi Yayın No: 5 , Testis Kanseri Güncelleme S:131-13

4. Schlegel PN, Chang TSK: Physiology of male reproduction: the testis,epdidymis and ductus deferens, Campbell's Urology. In Patrick C Walsh (eds.) WB Saunders Company. Philadelphia, 1997, Vol 4, P: 867-868 ,1254-1286.

5. Iain J McEwan, PhD and Albert O Brinkmann, PhD. Androgen Physiology: Receptor and Metabolic Disorder / https:// www.ncbi.nlm.nih.gov/books/NBK279028/

6. Efthimiou I, Mamoulakis C, Papageorgiou G, et al. Unilateral malignant leydig cell tumor of testis in a patient with contralateral cryptorchidism. Urol J 2009;6:60–2.

7. Mameli C, Selvaggio G, Cerini C, et al. Atypical Leydig cell tumor in children: report of cases. Pediatrics 2016;138:pii: e20160151.