

Oncology

Primary Carcinoid Tumor of the Testis: Case Report



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ABSTRACT

Carcinoid tumors conform less than 1% of all testicular tumors and most of them are neuroendocrine tumors which are primarily seen in testes. They are in the form of testicular metastasis from other organs. Carcinoid tumors may occur from differentiation of malignant teratomas. The main distinguishing feature of carcinoid tumors from other germ tumors is that they can be seen in all age groups. Histopathologically they have been described in two forms: well-differentiated and moderately differentiated. We aimed to discuss about a primary testicular carcinoid tumor in a 29 year old male patient.

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Introduction

Carcinoid tumors are neuroendocrine tumors that account for less than 1% of all testicular tumors; they are mostly primary tumors of the testes and rarely can be seen in the form of metastasis to the testes from other organs.¹ Carcinoid tumors may arise from differentiation of mature teratomas. The most important feature that differentiates carcinoid tumors from testicular germ cell tumors is that carcinoid tumors can be seen in all ages.² Histopathologically, moderately differentiated, and well-differentiated forms have been identified. This histopathological classification is important in the decision making for treatment and follow-up.

Case presentation

Twenty-nine years old male patient admitted to our clinic with a painless mass in his left scrotum for 6 months. His medical history revealed no genital trauma and genital infection. On his physical examination, there was left scrotal painless, firm mass on palpation. Beta HCG, alpha-fetoprotein, and LDH values were within normal limits. The patient showed no evidence to suggest paraneoplastic

syndrome. Ultrasound examination showed a heterogeneous solid mass of 50 × 40 mm in size that is surrounded by normal testicular tissue. Inguinal orchiectomy was scheduled (Figs. 1 and 2).



Figure 1. Appearance of left hemiscrotal mass.

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Figure 2. Left orchidectomy material.

was no tumor infiltration outside the tunica albuginea, tunica vaginalis, rete testis, epididymis and vas deferens. There was no Intratesticular Germ Cell Neoplasia (ITGCN) in testicular tissue. Tumor was diffusely stained with PANCK, synaptophysin, chromogranin, CD56 and CD117 and focal positive with EMA stain. The proliferative index was low by Ki-67 (Fig. 3). Thus tumor is classified characteristically well-differentiated carcinoid tumor.

Discussion

Carcinoid tumors known as neuroendocrine tumors frequently occupy the intestinal tract or the respiratory system. In the literature, carcinoid tumors are mostly reported in form of case reports. Due to their outnumbered appearance, carcinoid tumors can not be evaluated by modern classification systems. Wang et al presented 29 primary testicular carcinoid cases from 7 academic institutions. There is no distinguishing marker for carcinoid tumors than other tumors of testes. Carcinoid tumors occur in all age groups. Inguinal orchidectomy is the therapeutic option without recurrences or metastases. When there are no symptoms of carcinoid syndrome or evidence of metastasis, diagnosis can only be confirmed by histopathological examination of the testicular mass.³ The primary testicular form is thought to originate from Leydig cells, germinal cells or differentiation of a teratoma.⁴ In 10% of the cases carcinoid syndrome may manifest itself by activation of vasoactive amines like serotonin especially in liver or lung metastases. In carcinoid syndrome, erythema on upper torso and face due to the secretion of vasoactive amines, abdominal pain, diarrhea, cramps and attacks of asthma can be seen as symptoms. Serotonin metabolite 5-Hydroxy Indole Acetic Acid (5-HIAA) in urine causes bronchoconstriction, gastrointestinal motility increase, vascular spasm and dilatation.⁵ To investigate the primary focus, Computerized Tomography (CT), barium contrast investigations, especially Indium-¹¹¹ labeled

Histopathological examination showed trabecular, tubular structures and solid islands of atypical tumor formation. Mitotic activity was seen in 1–2 per 10 HPF. Except lymphovascular invasion, there

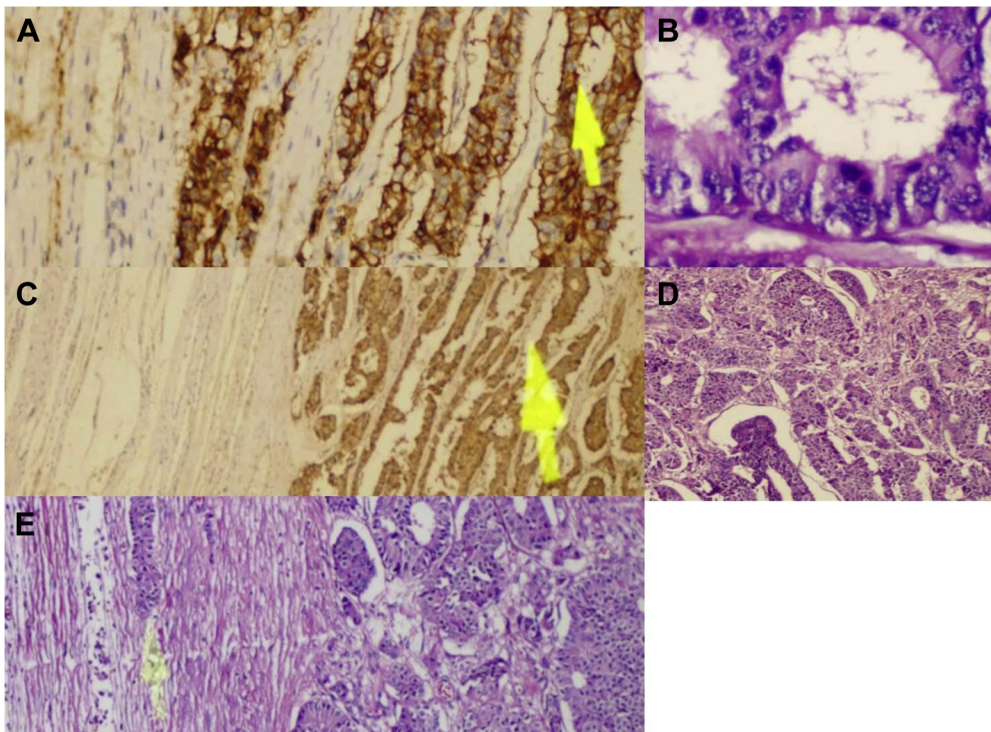


Figure 3. (A and C) Tumor cells are diffusely and strongly positive for chromogranin and synaptophysin. (B and D) Tumor has classic insular pattern (C) and tubular pattern (B). (E) Tumoral invasion a lymph vessel adjacent to tumor.

octreotide somatostatin receptor scintigraphy can be scheduled for patients.⁶

The histopathologic assessment has great value in the classification of carcinoid tumors. Well-differentiated type is said to have mitotic figures less than 2 per 10 HPF characterized with mild cellular atypia of prominent nucleoli. Moderately differentiated carcinoid tumors are characterized by necrosis and moderate cellular atypia and necrosis with mitotic activity more than 3 per 10 HPF. These lesions with the morphology of atypical carcinoid can occasionally exhibit metastatic spread.³ Histopathologic assessment of our patient was well-differentiated carcinoid tumor.

Conflicts of interests

None.

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