

Case Report

Primary Carcinoid Tumor of the Testis Found at the Time of Elective Sterilization

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Carcinoid tumor of the testis can occur as a primary neoplasm or as metastases. This tumor accounts for less than 1% of all testicular neoplasms, with 1.1%–3.1% of cases associated with carcinoid syndrome ([Hayashi et al, 2001](#)). We report a case of primary carcinoid tumor of the testis found during examination prior to elective sterilization.

Case Report

A 41-year-old patient seeking elective sterilization presented with a thickened, tight scrotum. No abnormalities were noted during physical examination. Per our protocol, aggressive scrotal reheating with a warm towel was used prior to vasectomy to help identify the vas deferens. A "fullness" of the right testis was observed that was not evident during preoperative consultation or by patient testicular self-examination. Per the patient's request, bilateral vasectomies were performed, and the patient underwent a scrotal ultrasound that showed a 3.1- x 2.2- x 1.9-cm hypoechoic mass in the superior right testicle. He subsequently underwent a radical inguinal orchiectomy. Preoperative β -human chorionic gonadotropin and α -fetoprotein were normal. Pathologic analysis showed a pure carcinoid tumor associated with teratoma ([Figure 1](#)). Immunohistochemical staining was positive for chromogranin and synaptophysin ([Figure 2](#)). Upon learning the diagnosis, the physician ordered a subsequent workup that resulted in a negative computed tomographic scan of the chest, abdomen, and pelvis; a negative 24-hour urinary 5-hydroxyindolacetic acid (HIAA) test; and a serum serotonin level measurement. There were no physical signs of carcinoid syndrome. The patient has been monitored for 9 months and has no evidence of disease.

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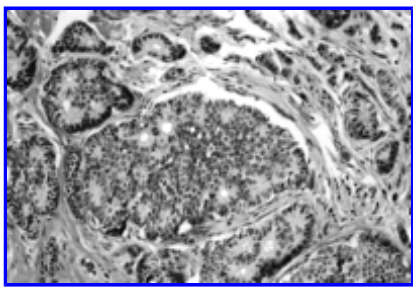


Figure 1. Pure carcinoid tumor of the testis (20x magnification).

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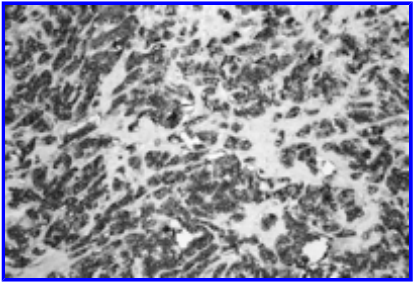


Figure 2. Immunohistochemical staining of carcinoid tumor with synaptophysin (10x magnification).

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Discussion

Approximately 57 cases of primary testicular carcinoid have been reported in the literature. Tumors occurred most commonly in individuals ranging in age from 40 to 60 years. Twenty-five percent of primary testicular carcinoid tumors are mixed with teratoma, which portends an indolent and benign clinical course. Larger tumors (7.3 vs 2.9 cm) or the presence of carcinoid syndrome was more likely to metastasize ([Zavala-Pompa et al, 1993](#)). The overall metastatic rate was 12%, and of those with metastases, 50% of the patients had carcinoid syndrome.

As these tumors are rarely suspected preoperatively, once the diagnosis is confirmed, a metastatic workup should include a baseline 24-hour urinary 5-HIAA test; a computed tomographic scan of the abdomen, pelvis, and chest; a measurement of serum serotonin level; and possibly a gastrointestinal contrast study ([Sutherland et al, 1992](#)). Radical orchiectomy is generally curative in most patients, with more extensive resections reserved for those patients with metastases, given the slow-growing nature of the carcinoid tumor. The prognosis is good, especially for tumors mixed with teratoma. Adjunctive chemotherapy is not of significant benefit for local or metastatic carcinoid tumors. A review of the 57 patients previously mentioned showed that 3 patients (5%) died of metastatic disease ([Zavala-Pompa et al, 1993](#)).

Long-term follow-up is recommended, as there has been a report of metastatic carcinoid tumor 17 years after the primary tumor was removed ([Hayashi et al, 2001](#)). Recommendations for follow-up include a review of medical history, a physical examination, and a 24-hour urinary 5-HIAA test every 3 months for the first year and then annually thereafter ([Sutherland et al, 1992](#)). In conclusion, any male patient presenting for elective sterilization must undergo a careful testicular

examination, as these patients often fall into a higher-risk group for testis tumors. If there is any palpable abnormality on physical examination, a scrotal ultrasound should be performed. Although abnormalities are difficult to palpate in these patients, scrotal rewarming can immensely improve tactile sensation in both the vas and testes and permit any abnormalities to be discovered.

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