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CARCINOMA OF THE RETE TESTIS: CASE REPORT AND REVIEW OF THE LITERATURE

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ABSTRACT

The literature suggests that carcinoma of the rete testis is a rare neoplasm of unknown etiology that arises in the mediastinum testis and may grow slowly for months before clinical detection. Diagnosis is often confounded by symptoms suggesting inflammation in middle aged and older men presenting with^diffuse enlargement rather than discrete testicular nodules. Pathological features are those of an adenocarcinoma but are not sufficiently distinctive to identify the rete testis as the site of origin. Many patients die of the disease soon after diagnosis despite local resection with or without adjuvant therapy. Long-term survival has been observed in at least 2 cases and more than 40% of the patients were alive without disease when reported in the literature. Much of the available information is incomplete, however, and firm conclusions regarding the nature of this cancer must await more solid data.

KEY WORDS: testicular neoplasms, rete testis

Carcinoma of the rete testis is a rare testicular neoplasm. Most of the 43 tumors identified in the literature have been individual case reports. Previous reviews of the subject have accounted for less than 30 patients, and have been influenced by the early and less well documented cases. Clinical history, physical examination and laboratory investigation have often been incompletely documented and the diagnosis has rarely, if ever, been suspected before pathological examination of the tumor. The commonly held belief that these cancers have an invariably fatal course is not substantiated by the evidence presented in the literature. We present a well documented case of carcinoma of the rete testis and summarize the literature.

CASE REPORT

A 57-year-old, white, married man consulted the doctor in January 1988 for the presence of a tender nodule in the right testicle. He was initially treated with antibiotics for orchitis. The pain subsided but the testicle remained enlarged and indurated. Medical, social and family histories were noncontributory. At hospitalization the right testicle was twice the normal size and diffusely firm. Blood glucose and alkaline phosphatase levels were elevated, and albumin was low. Other blood and serum analyses as well as urinalysis were normal. Ultrasound revealed an intratesticular mass. Chest x-ray and whole body computerized tomography failed to reveal other primary or metastatic lesions. Right radical inguinal orchiectomy was performed.

The specimen Consisted of a testicle and attached spermatic cord. The testicle measured 5.0 x 3.5 X 3.0 cm. and contained a firm, slightly lobulated mass measuring 3.0 X 2.5 x 1.5 cm. (fig. 1). The mass was located in the hilus and extended into the testicle. It was not encapsulated and had a pale gray cut surface. Smaller satellite nodules were present beneath the tunica albuginea. There were fibrous adhesions between the tunica albuginea and adjacent epididymis. The spermatic cord was not involved. Histologically, the tumor filled and distended the rete ducts, and invaded the adjacent tissue eliciting a desmoplastic reaction (fig. 2). Papillary structures were present but did not form a major component of the tumor. Foci of necrosis and microcalcification occurred. Tumor cells were

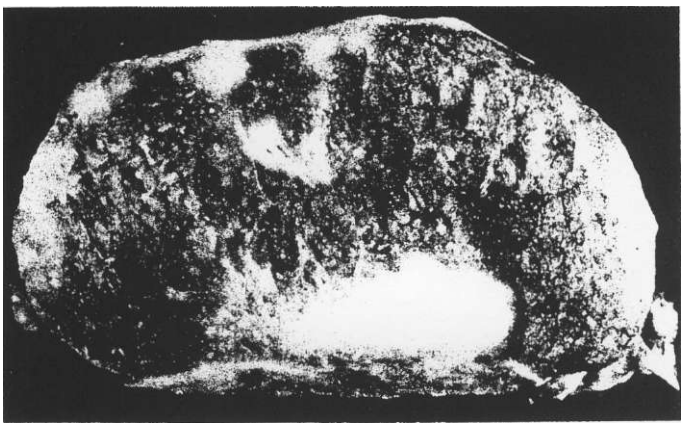

FIG. 1. Sagittal section of testicle. Tumor is predominantly located in hilar region.

cuboidal to columnar with ovoid nuclei and prominent nucleoli. A few mitoses were identified. The surrounding seminiferous tubules were compressed but not invaded. The remainder of the testicle was normal. The tumor cells reacted positively to antibodies for cytokeratin but negatively to antibodies for prostate specific antigen and leukocyte common antigen Periodic acid, Schiff and mucicarmine reactions were negative Electron microscopically, the tumor cells were arranged on basal laminae with the luminal surfaces evaginated into short microvilli. The cytoplasm contained scattered plates of rough endoplasmic reticulum, few mitochondria and rare myelin figures.

Subsequent computerized tomography revealed enlargement of the left adrenal gland considered by the radiologist as non-neoplastic. A needle aspirate of the enlarged area contained benign adrenal cells. The patient underwent para-aortic lymph node dissection 1 month later and microscopic foci of carcinoma similar to that found in the testis were present in 1 lymph node Chemotherapy with cis-platinum, etoposide and doxorubicin was initiated. Despite treatment, radiological evidence of metastatic disease to both lungs and para-aortic lymph nodes was present at death in March 1989. Permission for autopsy was not granted.

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