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·*Case Report*·

Benign intratesticular schwannoma: a rare finding

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Abstract

Schwannoma is a peripheral nerve tumour, occasionally located in the genitourinary tract. We described an extremely rare case of intratesticular neurinoma in a 79-year-old patient. (*Asian J Androl 2006 Jan; 8: 101-103*)

Keywords: schwannoma; Schwann cells; testicular neoplasm; S100 protein

1 Introduction

Schwannoma is a benign neuronal tumor composed of well-differentiated Schwann cells. Common locations of the tumor include the head, neck, mediastinum and retroperitoneum. Schwannomas are usually asymptomatic until they enlarge and compress the surrounding tissues [1]. We described the clinicopathologic features of a schwannoma located in a patient's testis.

2 Case report

A 79-year-old man was admitted to the hospital with a right, slowly enlarging, intratesticular mass. Scrotal palpation confirmed the presence of a small and painless swelling with an elastic consistency. The left testicle was normal in shape and size and the rectal digital examination pointed out an enlarged but regular prostate. The values of alpha-fetoprotein and beta-human corionic gonadotropin (beta-HCG) were unremarkable and the patient did not show signs of Von Recklinghausen's disease. Scrotal ultrasound examination revealed a well-circumscribed, 1-cm hypoechoic mass located in the parenchyma of the right testis, apparently reaching the albuginea. Radical right orchifunicolectomy was performed with an inguinal approach.

2.1 Macroscopical findings

The surgical specimen consisted of the right testis (5.5 cm × 3.5 cm) with a nodular, well-circumscribed, grey intratesticular solid mass of 0.9 cm reaching the albuginea. The remaining testicular parenchyma and peritesticular structures were unremarkable.

2.2 Microscopical findings

The nodule was unencapsulated and characterized by a uniformly paucicellular proliferation of spindle cells, with oval, tapered-end nuclei, showing small nucleoli and occasional clear intranuclear vacuoles. Tumor cells were arranged in short, haphazard bundles (Figure 1). Mitoses and regressive changes (such as scattered atypical nuclei, hyalinization or hemosiderin deposition) were

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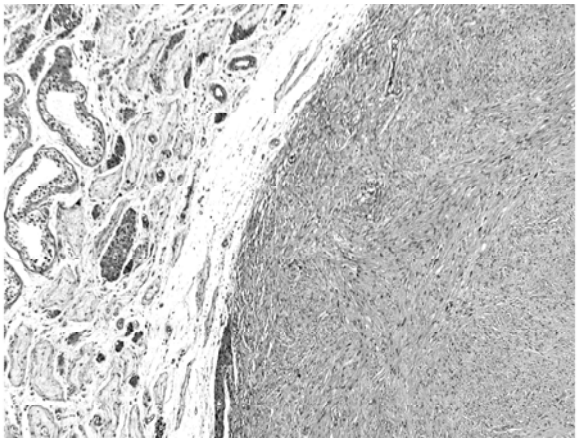

Figure 1. Microscopical pattern of intratesticular neurinoma with haematoxylin–eosin staining.

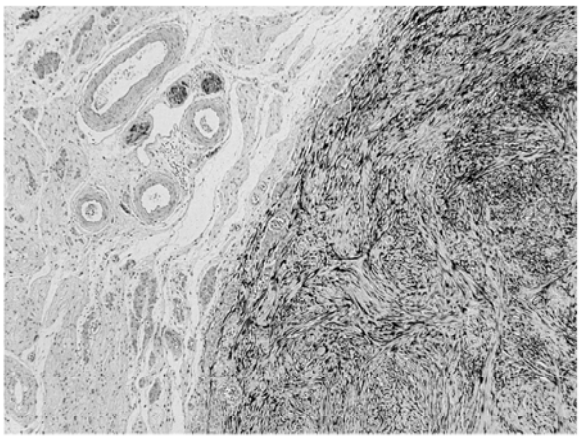

Figure 2. Immunoistochemical analysis with S100 protein reaction.

absent. Tumor elements were immunoreactive with S100 protein; but they resulted completely negative for smooth-muscle actin, desmin and CD34, thus confirming the neural differentiation of the neoplasm (Figure 2).

During the 18-month follow-up, no recurrence was noticed.

3 Discussion

Schwannoma (also called neurinoma or neurilemmoma) is a neural neoplasm originating from Schwann cells that sheath the small nerve branches; it may also arise from ectopic neural cells located into the muscularis propria, such as myoenteric plexus. Schwannoma lesions are mostly benign, solitary and grow slowly. These types of neoplasm are rarely seen in the genitourinary organs. Intrascrotal extratesticular and paratesticular neurilemmomas have been previously reported [1–8]; while a seminal intra-vesicular origin was described by Latchamsetty [9]. Jiang *et al.* [10] reviewed five schwannomas of the genitourinary tract, including two penile, one testicular, one prostatic localization and the remaining one arising from the spermatic cord.

Malignant schwannomas have also been described in the literature as either solitary or in association with Von Recklinghausen's disease [11]. Jiang *et al.* [10] reported a case of a malignant testicular schwannoma that was weakly positive to S100 protein and metastatic behavior; Safak *et al.* [12] described the case of a intrascrotal malignant schwannoma displaying rhabdomyoblastic features with local recurrences.

Although neurogenous tumors are generally encountered in young and middle-aged adults [13], the presentation age of male genital schwannomas seems to be variable, and includes a significant number of elderly patients. Differential diagnoses of testicular masses in the elderly include mainly lymphoreticular neoplasms or lymphomas [14, 15], germ cell tumors (classical, spermatocitic and anaplastic seminoma) [16] and tumors of gonadal stromal origin [17]; otherwise, even neoplasms of supportive structures, both benign and malignant (osteosarcoma [18], adenosarcoma [19] and leiomyosarcoma [20]), have been described in elderly subjects. Immunohistochemical analysis is able to define the histological origin of the tumor: in this case, positive immunostaining for S100 protein coupled with a negative reaction to CD34 and smooth-muscle actin and desmin were required to confirm the diagnosis of schwannoma and to rule out other diagnostic possibilities. S100 protein is an acidic protein widely distributed in the central and peripheral nervous system and it is proven to be very helpful in discriminating benign nerve sheath tumors and melanomas.

To our knowledge, this is the second case of benign intratesticular schwannoma so far reported in the published literature. The first was a report of an unusual plexiform growth of testicular neurinoma by Smith *et al.* [21].

Considering the benign behavior of this neoplasm, an explorative approach with complete excision of the mass may be advisable, and histologic examination with

immunohistochemical analysis are always required to achieve the right diagnosis and the appropriate therapeutic approach.

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