Large Presacral Schwannoma after Radical Prostatectomy

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1. Introduction

Pelvic schwannomas are uncommon tumors that rarely present with urinary tract consequences. In fact, there is only one prior report of a pelvic schwannoma occurring in a male patient [1]. Furthermore, the occurrence of a presacral schwannoma after prior pelvic surgery has never been previously described. This case describes a presacral schwannoma occurring after radical prostatectomy. In addition, it highlights the utility of magnetic resonance imaging (MRI) and percutaneous biopsy to establish the diagnosis and illustrates the success of complete surgical resection in the treatment of this rare disease.

2. Case history

A 56-year-old man underwent a radical prostatectomy for what proved to be pathologic stage T2a Gleason 3 + 3 organ-confined disease 6 yr prior to his current presentation. Since the time of his surgery the patient has had an unremarkable course and has remained without evidence of recurrent disease.

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Recently, on routine physical examination by his primary care physician, the patient was noted to have a rectal mass and was therefore referred to our division. On review of systems, the patient only commented on long-standing, mild urinary frequency; he had no other specific bladder or bowel dysfunction and no neurologic symptoms or other somatic complaints. Physical examination confirmed the presence of a significantly abnormal digital rectal examination notable for a very large mass palpable on the anterior rectal wall. Serum prostate-specific antigen (PSA) was undetectable and other blood chemistries and complete blood count all revealed values within normal limits. Results of abdominal/pelvic MRI demonstrated the presence a solid, well-circumscribed pelvic mass extending from the level of the sacrum posteriorly to the anterior abdominal wall (Fig. 1). The bladder and right ureter were compressed anteriorly with resultant right hydroureteronephrosis.

The patient underwent percutaneous biopsy of the mass, which revealed histologic findings suggestive of schwannoma. The patient was taken to the operating room and a large (15 × 10 × 9 cm) pelvic mass was excised (Fig. 2). At the time of surgery...

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Fig. 1 – Midsagittal T2-weighted magnetic resonance image demonstrates the well-circumscribed, hyperintense presacral mass that proved to be a schwannoma.

Fig. 2 – Intraoperative photograph shows pelvis mass in situ with right ureter retracted laterally off of the mass (toward top of picture; encircled with white vessel loop).
surgery the bowel, bladder, and right ureter were in close confines to the mass, but clear planes existed between the mass and each of these structures (Fig. 3). In addition, the mass was easily dissected and removed off the sacrum posteriorly, with no nerve root involvement grossly. The patient had an unremarkable postsurgical course and was discharged on postoperative day 2. Histopathology of the operative specimen revealed a schwannoma (Fig. 4) with its characteristic slender spill cells and their elongate nuclei (Fig. 5). Surgical margins were negative and there were no associated malignant features. One year after surgery, the patient is doing well with no evidence of recurrence; he has not experienced any neurologic, bladder, or bowel symptoms and states that his mild urinary frequency has resolved (Fig. 6).

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Question:
All of the following are true regarding schwannomas except:

A. Schwannomas are tumors radiating from neural sheath (Schwann) cells.
B. Although they can be found along any major nerve trunk, schwannomas are most commonly have an intracranial location (eg, acoustic neuroma).
C. Schwannomas are highly malignant lesions typically requiring radical surgical excision as part of a multimodal (chemotherapy, radiation therapy) approach.

D. Biopsy can prove useful in identifying a schwannoma by demonstrating characteristic slender spindle cells, which are immunoreactive to S-100.

Reference