

## Presacral Ancient Schwannoma in a Middle-Aged Man- A Rare Entity

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### INTRODUCTION

Schwannomas are benign tumours arising from neoplastic transformation of Schwann cells around the nerve fibres. Tumours situated deeply like in retroperitoneum or pelvis are usually asymptomatic and may not be detected. Such long standing tumours may undergo extensive degenerative changes giving rise to ancient schwannomas.<sup>[1]</sup> Ancient schwannoma is an uncommon variant of schwannomas characterized by extensive degenerative changes and hypocellular areas. Presacral ancient schwannomas are rare and most of the reported cases are in females. We describe computed tomography (CT) findings in a case of presacral ancient schwannoma in a 49 year old male patient.

### PRESENTATION OF CASE

A 49-year-old male patient presented with history of pain in umbilical and hypogastric region and constipation for three months. There was no history of urinary complaints, fever or abdominal distension. On examination, abdomen was soft and non-tender. No organomegaly was presented. Per-rectal examination was normal. CT abdomen revealed a well-defined thin walled cystic mass in the presacral location displacing the rectum towards left side. No enhancing solid component or septae were identified. No fat density or calcification was seen. There was no evidence of intrasacral extension or sacral foraminal widening. The lesion was in close proximity to one of the exiting right sacral nerve root suggesting the possibility of nerve sheath tumour. Laparoscopic excision of pelvic mass was done. Complex lobulated cystic mass was seen posterior to the urinary bladder. It was not adherent to the rectum, bladder or sacrum. On histopathology, it was found to be an ancient schwannoma.

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Figure 1a

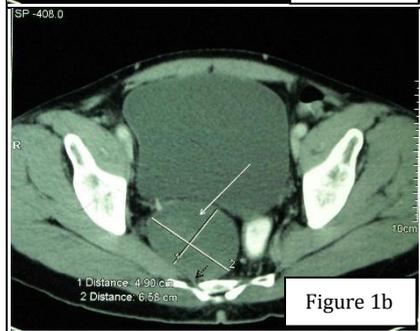


Figure 1b

**Figure 1. Axial contrast enhanced CT images (1a and 1b) show well defined cystic presacral mass (white arrows) displacing rectum towards left side. It is seen in close proximity to one of the exiting right sacral nerve root (dotted black arrow in 1a). No intraspinal extension is seen**



Figure 2a

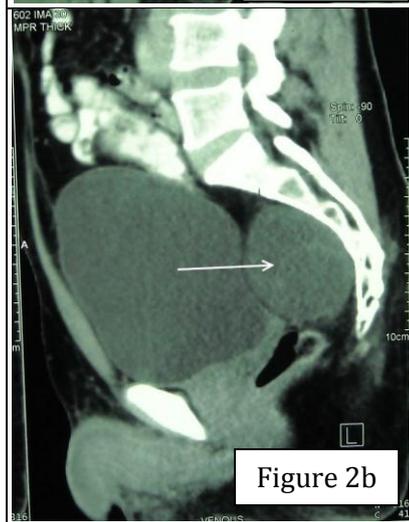


Figure 2b

**Figure 2 A & B. Coronal and sagittal reformatted CT images show cystic presacral mass (white arrows) displacing the rectum towards left side and indenting the posterior aspect of urinary bladder with intact intervening fat planes**

**DISCUSSION**

Schwannomas are benign tumours of nerve sheath origin. They are slow growing and encapsulated. Most commonly they are found in the head and neck and in the extremities.<sup>[2,3]</sup> Schwannomas show two types of patterns: highly organized

cellular areas (Antoni type A) and loose myxoid areas (Antoni type B).<sup>[2]</sup> Ancient schwannoma is characterized by selective loss of Antony type A pattern, extensive degenerative changes with perivascular hyalinization, calcification and cystic areas.<sup>[1,2]</sup> They arise from long standing tumours with slow growth with vascular insufficiency and resultant degeneration. Schwannomas are relatively rare in the spine and are even rarer in sacral region.<sup>[4]</sup> Ancient schwannomas are uncommon tumours which were first reported in 1951.<sup>[5]</sup> Retroperitoneal schwannomas account for only 0.7-2.7% of these tumours.<sup>[6]</sup> A review of literature shows that there are 16 reported case of retroperitoneal schwannomas.<sup>[7]</sup> Presacral ancient schwannomas are uncommon tumours mostly reported in females. First case of male presacral schwannoma was reported by Andonian et al in 2003.<sup>[8]</sup>

Presacral cystic masses have many differential diagnoses which include mullerian duct cyst, lymphangioma, presacral meningocele and epidermoid cyst. In female patients, ovarian masses are also in the differential diagnosis. Moreover, extensive cystic change can be mistaken for malignant peripheral nerve sheath tumours.<sup>[1,6,8]</sup> Calcification is common on histology in ancient schwannomas and has been described on CT scan, however it is not always seen, as in our case.<sup>[2,7]</sup>

**CONCLUSIONS**

Presacral ancient schwannomas are rare tumours which are difficult to diagnose pre-operatively. Ancient schwannomas should be included in the differential diagnosis of any retroperitoneal cystic mass. Supportive imaging findings include slow growing tumour with cystic areas and calcifications. If recognized pre-operatively, radical surgery can be avoided because these tumours are uniformly benign.

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