

Pre-sacral Giant Schwannoma :  
Removal by a Combined Anterior and Posterior Approach  
– A Case Report –

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– Abstract –

**Study Design :** This case report presents a rare case of pre-sacral giant schwannoma which originates from the S1 nerve root.

**Objectives :** To discuss a surgical approach for removal of pre-sacral giant schwannoma and review the pertinent literatures.

**Summary of Literature Review :** Pre-sacral tumors are unusual neoplasms that cause approximately one in 40,000 hospital admissions. Schwannoma represents only a small fraction of the many types of tumors that may be present in this region. Less than 1% of all spinal schwannomas occur in the sacrum. The treatment of this lesion is complete removal, which is curative.

**Materials and Methods :** A 46-year-old woman developed gradual back pain and radiating pain on her left lower extremity for about a year. There was no noted improvement with the use of conservative treatment. T1-weighted sagittal MRI reveals a large homogeneous low-signal intensity mass on left pre-sacral area and intrasacral extension of the tumor forming a dumb-bell shaped mass.

**Results :** The tumor was completely removed by a combined anterior and posterior approach. The excised mass was cylindrical, measuring 8x4x3 cm in size, which had originated from the S1 nerve root. It was histologically diagnosed as benign schwannoma. Satisfactory result was obtained after the complete removal of the mass.

**Conclusions :** We report a case of the successful and complete removal of a pre-sacral giant schwannoma and the affected nerve root through a combined anterior and posterior approach.

**Key Words :** Pre-sacral, Schwannoma, Combined anterior and posterior approach

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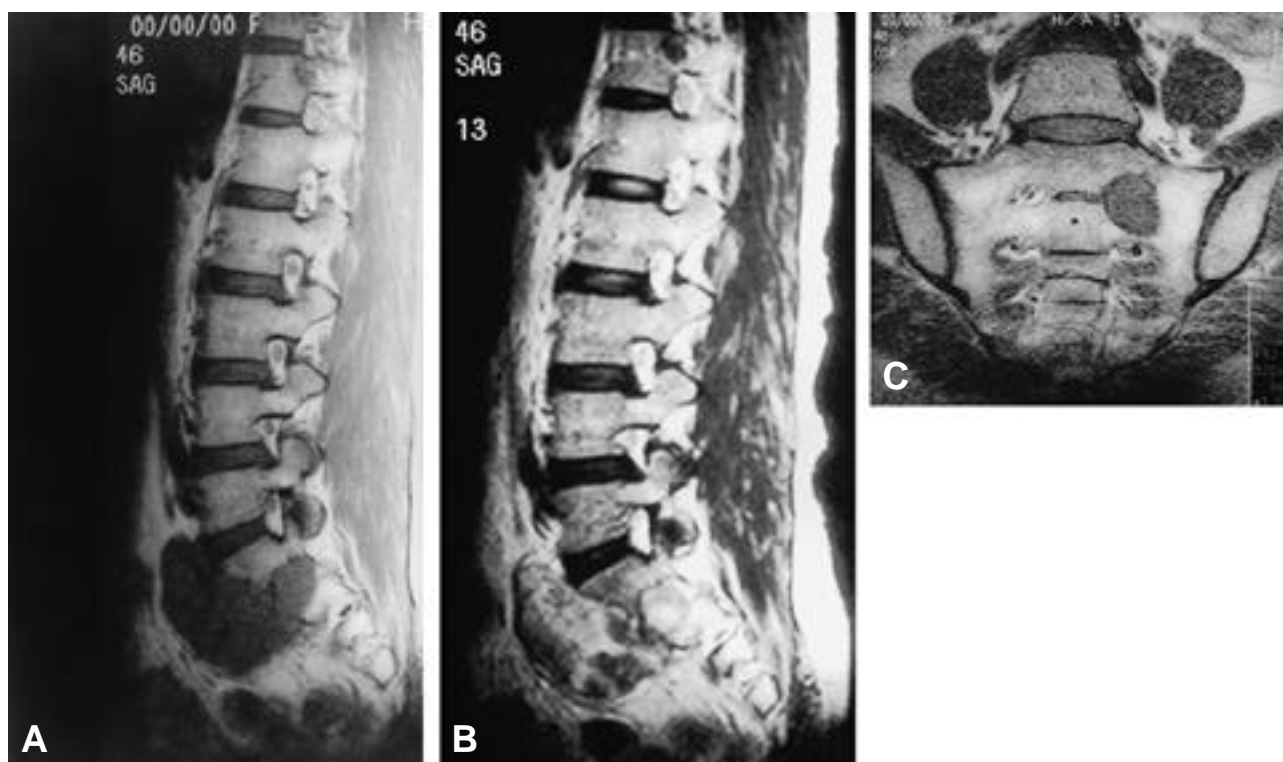
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**Fig. 1-A.** T1-weighted sagittal MR image showing a large homogenous low signal intensity mass. The large tumor is located at the left pre-sacral area and intrasacral extension of the tumor forming a dumbbell shaped mass.  
**B.** T2-weighted sagittal MR image showing a large inhomogenous high signal intensity mass.  
**C.** T1-weighted coronal MR image showing a well demarcated homogenous low signal intensity mass arising from S1 nerve root.

(Fig. 1C).

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(Fig. 3).

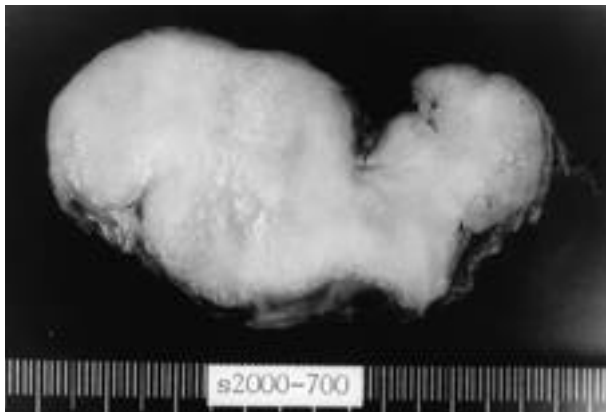
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(Fig. 2).

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**Fig. 2.** Cross section of the tumor showing a well encapsulated solid cylindric mass originates from S1 nerve root, measuring 8 × 4 × 3 cm.

schwann

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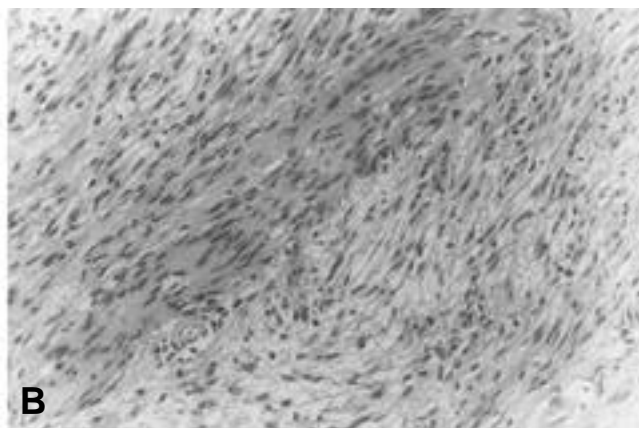
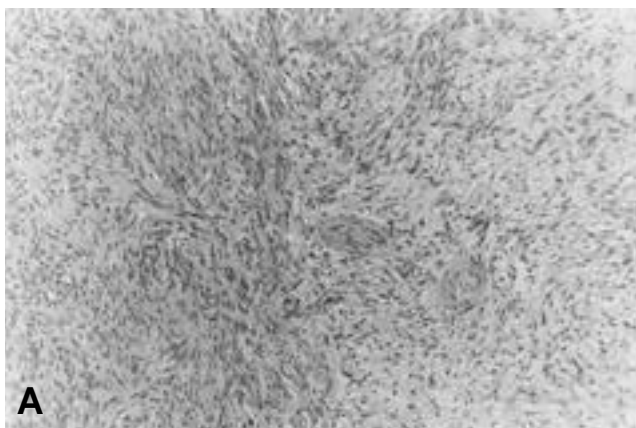
1,2,4,7)

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6,7)

1%

1).



**Fig. 3-A.** Photomicrography of the tumor showing compact cellular Antoni type A and loose myxoid Antoni type B areas(H-E stain, × 100).

**B.** Tumor cells of the cellular and loose areas showing elongated bipolar cells dispersed in fascicles(H-E stain, × 200).

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