



Image Report

# Extensive vertebral scalloping in a thoracolumbar junction spinal schwannoma

Toyin Ayofe Oyemolade<sup>1</sup>, Augustine Abiodun Adeolu<sup>2</sup>

<sup>1</sup>Department of Surgery, Federal Medical Center, Owo, <sup>2</sup>Department of Surgery, University of Ibadan/University College Hospital, Ibadan, Oyo State, Nigeria.

E-mail: \*Toyin Ayofe Oyemolade - toyinmolade@yahoo.com; Augustine Abiodun Adeolu - adeoluaa@yahoo.com



**\*Corresponding author:**

Toyin Ayofe Oyemolade,  
Department of Surgery, Federal  
Medical Center Owo, Michael  
Adekunle Ajasin Street, Owo,  
PMB 1053, Ondo State, Nigeria.

toyinmolade@yahoo.com

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## ABSTRACT

Severe vertebral scalloping in spinal schwannoma is very rare. When present, extensive scalloping of the vertebral bodies possesses significant treatment challenges in patients with spinal tumors. We present the computed tomography scan and magnetic resonance images of spinal schwannoma with marked vertebral scalloping in a 40-year-old Nigerian.

**Keywords:** Extensive, Schwannoma, Vertebral scalloping

## DESCRIPTION

A 40-year-old man presented with back pain and progressive weakness of the lower limbs of 6 years. He had been bed ridden for the 3 years preceding presentation. There was associated paraesthesia and sphincter dysfunction. Neurological examination revealed flaccid paraplegia. The sensory level was at T12. Magnetic resonance imaging showed a heterogeneously contrast enhancing tumor at T11–L2 with marked scalloping of T12 and L1 vertebral bodies [Figure 1]. Computed tomography scan showed scalloping of T12 and L1 with erosion of the pedicles [Figure 2]. He had gross total excision of the tumor. The histology of the tumor was cellular schwannoma. The immediate postoperative period was uneventful. He is now 3 months postsurgery. The power has improved to Grades 1–3 in the lower limbs, sensations have returned, but he is still incontinent of urine and feces.

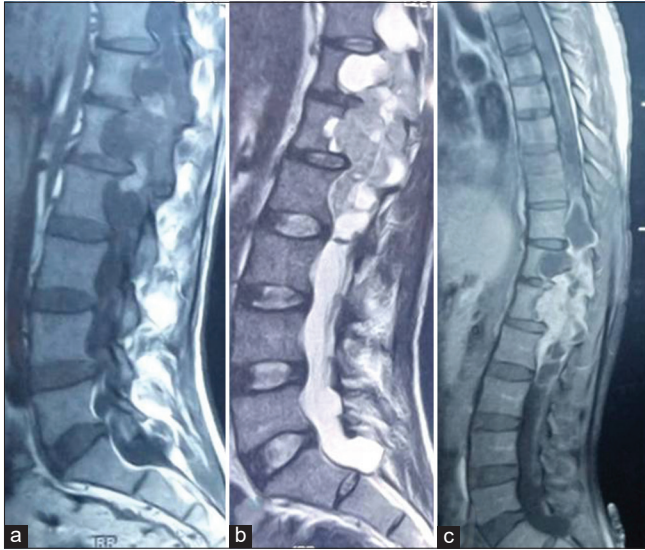
Spinal schwannomas are benign tumors arising from the Schwann cells of the nerve sheaths.<sup>[1]</sup> They are slow growing and may present with features of sensory, motor, or autonomic deficits. A common feature of these tumors on imaging is the exaggeration of the normal concavity of posterior surface of vertebral bodies (posterior vertebral scalloping sign) often caused by increased intraspinal pressure secondary to an expanding mass.<sup>[3]</sup> Although vertebral scalloping is a common imaging finding in spinal schwannomas, marked scalloping like in our patient is rare.<sup>[2]</sup> The presence of this severe form of scalloping possesses significant operative challenges and may require complex spinal reconstruction and long segment instrumentation.<sup>[2]</sup>

## Declaration of patient consent

Patient's consent not required as patients identity is not disclosed or compromised.

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**Figure 1:** Sagittal T1 (a), T2 (b) and T1+C (c) weighted magnetic resonance images showing mixed intensity, inhomogeneously contrast enhancing tumour at T11–L2, with associated syringomyelia and posterior scalloping of T12 and L1.

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Nil.

#### Conflicts of interest

There are no conflicts of interest.

#### REFERENCES

1. Borges G, Bonilha L, Proa M Jr, Fernandes YB, Ramina R, Zanardi V, *et al.* Imaging features and treatment of an intradural lumbar cystic schwannoma. *Arq Neuropsiquiatr* 2005;63:681-4.
2. Corley J, Kasliwal MK, O'Toole JE, Byrne RW. Extensive vertebral scalloping in a case of giant cystic spinal



**Figure 2:** Sagittal (a) and axial (b-d) computed tomography scan images showing extensive posterior scalloping of T12 and L1 vertebral bodies, and erosion of laminae and pedicles.

schwannoma: More than just a radiological diagnosis. *J Neurooncol* 2014;120:219-20.

3. Wakely SL. The posterior vertebral scalloping sign. *Radiology* 2006;239:607-9.

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