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Giant Cauda Equina Schwannoma: CT Appearance

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A review of the literature revealed that very few cases of spinal schwannomas have been detected and diagnosed by computed tomography (CT) [1–5]. We report a case in which a cauda equina schwannoma was accurately delineated with CT.

Case Report

A 38-year-old man had a 10 year history of low back pain and progressive weakness and loss of sensation of the left lower leg and foot during the past 7 months.

Plain films of the lumbar spine revealed the effects of chronic bone erosion: (1) scalloping of the posterior surfaces of the vertebral bodies L2–S1 (fig. 1A); (2) increased interpedicular distances with diminished transverse and vertical pedicular dimensions; and (3) laminar erosions. Myelography demonstrated complete block at L2.

Contrast-enhanced CT showed a uniformly dense, soft-tissue mass with attenuation coefficients of about 70 H. The chronic erosive changes were better delineated by CT (fig. 1B). The mass occupied the entire spinal canal from L2 to S1. Extension of the tumor at L4–L5 and L5–S1 resulted in widening of the intervertebral foramina and characteristic "dumbbell"-shaped lesions of spinal schwannomas (fig. 1C).

Discussion

The two most common primary tumors of the lumbar spinal canal, schwannomas and ependymomas, usually cannot be differentiated radiographically [2]. CT was superior to myelography and plain films for detection and localization of the giant cauda equina schwannoma. It demonstrated the extension of the tumor into the intervertebral foramina and yielded a more

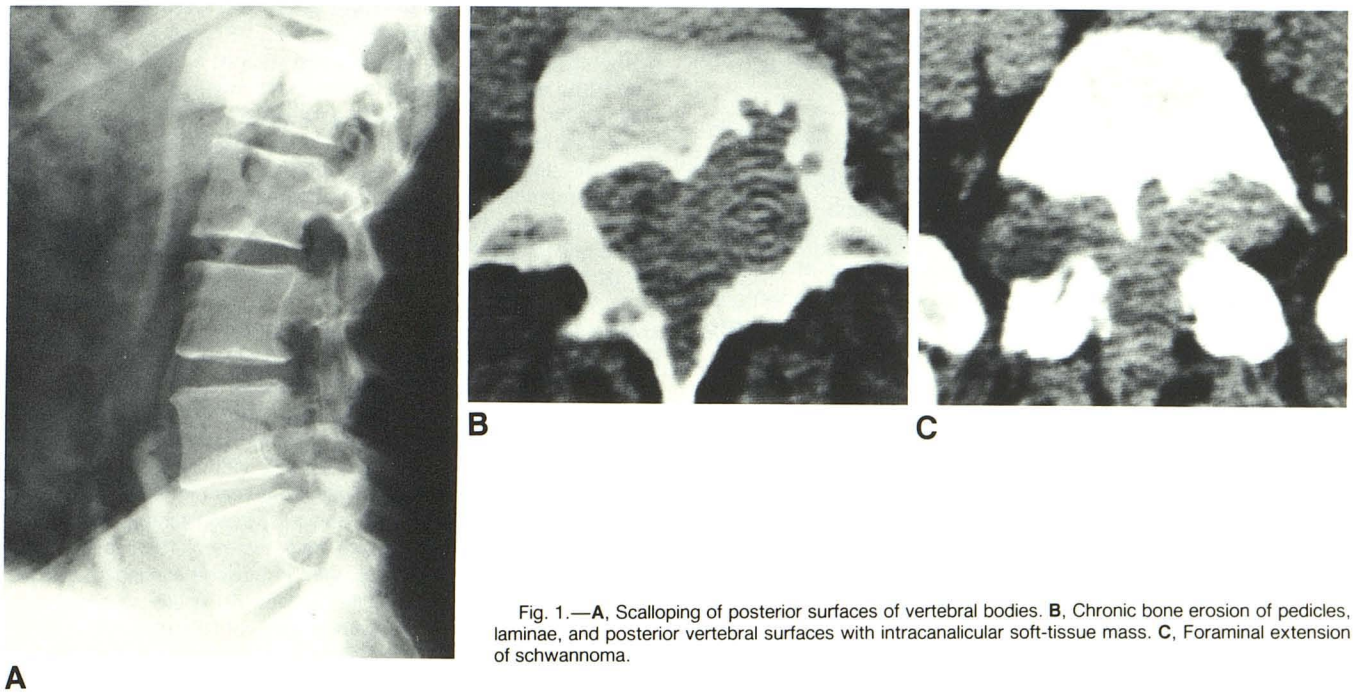

Fig. 1.—**A**, Scalloping of posterior surfaces of vertebral bodies. **B**, Chronic bone erosion of pedicles, laminae, and posterior vertebral surfaces with intracanalicular soft-tissue mass. **C**, Foraminal extension of schwannoma.

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accurate assessment of bone erosion than did conventional techniques [4, 5]. The findings of chronic bone erosion suggested a long-standing, benign etiology.

The CT appearance of small extradural schwannomas may be pathognomonic but cannot be interpreted as unequivocally benign [4, 6]. The CT findings of a suspected giant cauda equina schwannoma, with intra- and extradural components, are suggestive but not pathognomonic. The differential diagnosis would include other benign as well as primary and metastatic malignant neoplasms.

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