

CLINICAL IMAGE

Severe kyphoscoliosis in a 17-year-old patient with T11-T12 hemivertebra: X-ray imaging of the abnormal anatomy of the thoracolumbar spine

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Abstract

Young patient exhibiting lumbar pain accompanied by severe kyphoscoliosis-hemivertebra of the thoracolumbar spine; a rare etiology with difficult surgical treatment.

KEYWORDS

hemivertebra, kyphosis, scoliosis, thoracolumbar pain

1 | CASE DESCRIPTION

A 17-year-old male patient, with known history of kyphosis, presented with mild low back pain existing over the last 3 years. From his medical history, there was nothing noteworthy. Physical examination did not reveal any neurologic deficit or any other finding. Static X-rays revealed the presence of severe kyphosis and scoliosis with malformation of the thoracolumbar region Figure 1, Figure 2. Specifically, T11 and T12 vertebrae appeared hypoplastic and malformed together forming a single hemivertebra. Conservative treatment with physical therapy was the initial therapeutic strategy, but without successful outcome. After posterior fixation with instrumentation and fusion, the patient was alleviated from his symptoms and his posture was improved Figure 3.

Hemivertebra is a congenital failure in the formation of vertebral bodies, occurring at ~0.3 per 1000 live births.^{1,2} Many procedures have offered treatment, including posterior or anterior-posterior fusion with or without instrumentation, combined anterior and posterior convex hemiepiphysiodesis and hemivertebra excision with fusion.³ This entity can



FIGURE 1 Anteroposterior face X-ray of the thoracolumbar spine indicating severe scoliosis

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FIGURE 2 Right lateral profile X-ray of the thoracolumbar spine depicting the hemivertebra (white asterisk)

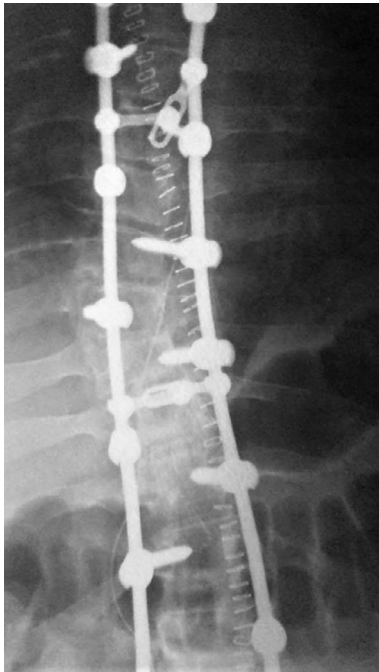


FIGURE 3 Postoperative anteroposterior face X-ray presenting the posterior fixation with instrumentation

present with pain, scoliosis, kyphosis, and instability of the spine, seriously affecting the quality of life of patients. Although rare, it is observed in children and adults, and it is crucial to be recognized and treated by experienced spine surgeons.


CONFLICT OF INTEREST

None declared.

AUTHOR CONTRIBUTIONS

KS: involved in conception and design, acquisition of data, analysis and interpretation of data, critical revision, general supervision, and final approval. GG and GN: involved in acquisition of data, drafting of manuscript, critical revision. GM and DK: involved in acquisition of data, analysis and interpretation of data, critical revision.

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