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Case Report

Congenital absence of a lumbosacral facet joint: A case report

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ABSTRACT

Background: Congenital absence of the lumbosacral facet joint is extremely rare, with only 26 cases reported in the literature. Here, we present a patient with the unilateral absence of the left fifth lumbar inferior articular process and reviewed the relevant literature.

Case Description: A 32-year-old gentleman, who had undergone right L4-5 lumbar microdiscectomy 3 months ago now presented with acute low back and left leg pain following a fall. He is now presented with acute low back and left leg pain following a fall. Plain radiographs of the L-S spine revealed an absent left L5–S1 zygapophyseal joint. The magnetic resonance imaging and computed tomography studies additionally confirmed an absent unilateral left L5 lumbar inferior articular process.

Conclusion: Patients presenting for lumbar surgery may have unilaterally absent lumbosacral zygapophyseal joints, which may impact the outcome of surgical treatment.

Keywords: Congenital absence, Facet joint, Lumbosacral

INTRODUCTION

Congenital absence of the lumbosacral facet joint, most typically involving the L5–S1 level, is extremely rare, having been reported in just 26 cases.[2] These lesions are likely attributable to defects in the neural arches/ossification centers of the vertebra that occurs during fetal life, around the 9th week of embryonic development. Most cases are asymptomatic and can be managed conservatively.[5] Here, we report a patient with the unilateral absence of the left fifth lumbar inferior articular process and reviewed the relevant literature.

CASE REPORT

Three months ago, a 32-year-old male had a right L4–L5 lumbar microdiscectomy. Two months ago, he sustained a fall and developed acute left lower extremity sciatica accompanied by positive left-sided 40 degree SLR, and weakness in the left extensor hallucis longus distribution (MRC 4/5). Plain X-rays documented the prior right side L4–L5 hemilaminotomy defect and the absent left L5-S1 zygapophyseal joint [Figure 1]. The MRI revealed a new left-sided L4–L5 disc prolapse. Both the MR and 3D computed tomography (CT) confirmed the absent unilateral

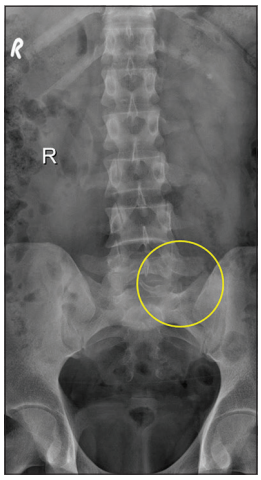

Figure 1: Anteroposterior X-ray image showing the absence of the left L5–S1 zygapophyseal joint.

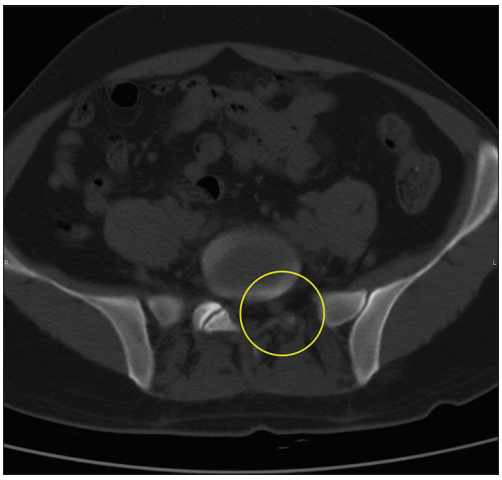

Figure 3: Axial computed tomography scan cut of the spine showing the absence of the L5–S1 facet joint on the left side.

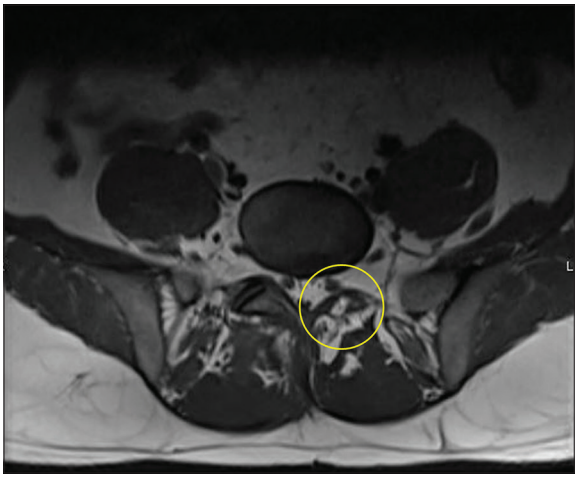

Figure 2: On axial spine MRI, the left inferior articular process of L5 is absent, with the superior articular process of the S1 markedly hypoplastic.

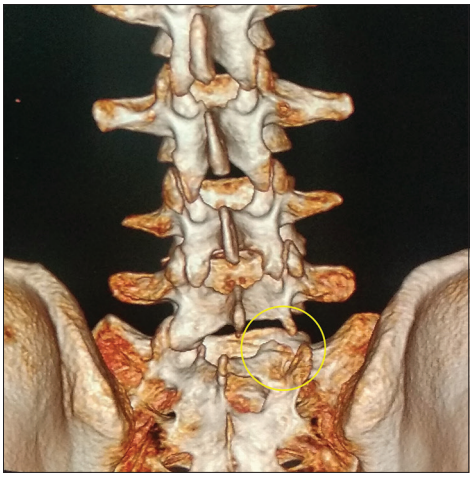

Figure 4: Computed tomography scan 3D reconstruction shows agenesis of the L5 inferior articular process on the left side.

left L5 inferior articular process [Figures 2-4]. After an unsuccessful L4–L5 transforaminal epidural injection, the patient successfully underwent an endoscopic left-sided L4–L5 transforaminal discectomy.

DISCUSSION

Congenital absence of the lumbar facet joint is extremely rare; typically, 80% involve the L5–S1 level.[2] There are just 26 cases reported in the literature, and two patients had bilateral absence of facets [Table 1].[2] These lesions likely arise due to the failure of the ossification of three primary ossification centers in the vertebral body (e.g., most probably due to insufficient blood supply during fetal life).[2]

CT scans along with 3D reconstruction best document these lesions. MRI may additionally confirm further pathological changes, for example, nerve root anomaly (conjoined nerve root),[1] pedicular defects, spinal bifida, spinal instability, or hypertrophic contralateral facet.[4]

Table 1: Demographics

Total cases	26
Average age	34.4 years (Range 16–66 years)
Male:female	1:1.2
Left:right	1:1.5
Most common level	L5–S1
Bilateral absence of cases	2

Clinical presentation

These patients are typically asymptomatic, while others may have mild low back pain easily treated with conservative measures. The cases with a neurological deficit due to spinal

instability may be surgically managed, for example, with decompression and/or fusions. Due to the small number of cases reported, the treatment of these lesions remains controversial.[3]

CONCLUSION

Following a unilateral laminotomy, recurrent contralateral symptoms may be attributed to a new contralateral disc herniation in conjunction with the congenital absence of the contralateral lumbosacral zygapophyseal joint.

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Declaration of patient consent

Patient's consent not obtained as patient's identity is not disclosed or compromised.

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Conflicts of interest

There are no conflicts of interest.

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