

Limbus Vertebra Presenting with Inflammatory Low Back Pain: A Case Report

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ABSTRACT

Limbus vertebra is a condition characterized by marginal interosseous herniation of the nucleus pulposus, and causes non specific symptoms like low back pain, back pain, muscle spasms and radiculopathy. It is frequently confused with vertebral fracture, infection, schmorl nodule or tumour because it has not a spesific symptom. It usually causes mechanical low back pain rather than inflammatory low back pain. We reported a patient presented with inflammatory low back pain and diagnosed with anterior limbus vertebra because it is rare and the patient has atypical clinical presentation.

Keywords: Anterior limbus vertebra, Interosseous herniation, Radiculopathy

CASE REPORT

A 29-year-old woman had worsening and buttock spreading low back pain for four mounths. She also describes one and half hour long morning stiffness and night pain which awakes her from sleep. She said her low back pain had been increased after physical activity and also continues during rest.

She had a traffic accident when she was 6 and she has had relapsing low back pain periods since she had carried a heavy thing when she was 14. She has been also followed for hypothyroid and polycyctic over syndrome.

Her low back motions were painfull and her lomber flexion was limited on physical examination (lomber flexion:40°, extantion: 30°, lateral flexion: 25°)

She had paravertebral spasm and tenderness bilaterally. She had pain on right sacroilac joint compression . FABER and FADIR tests were positive on her right hip. Lomber Schober was measured as 15 cm. Her other joints and neurological examiantion (muscle strength, reflexes and sensory examination) were normal.

Laboratory findings were in normal range. Erythrocyte sedimentation

rate was 10 mm/hour (normal range 0-20mm/hour), CRP was 0,03mg/dl (normal range 0-0,5) and RF was 10,7 (normal range 0-15U/ml). Chlamydia trachomatis IgG and IgM and brucella agglutination test were negative

There was a sclerotic bone fragment placed anterosuperior of the 4th lomber vertebra on plain lumbar spine X-ray [Table/Fig-1]. Lumbosacral MR revealed hyperintense area placed anterosuperior part of the 4th lumbar vertebra [Table/Fig-2]. Sacroiliac MR was normal.

We treated patient with diclofenac sodium 150 mg /day, tizanidin 6mg/day for 2 weeks and suggested rest. Her syptoms improved after treatment.

DISCUSSION

Limbus vertebra is a condition characterized by marginal interosseous herniation of the nucleus pulposus. It comes from a defect under the ring apophysis or in vertebral endplate during the skeletal development stage [1]. Limbus vertebra causes non specific symptoms like low back pain, back pain, muscle spasms and radiculopathy. It is frequently confused with vertebral fracture, infection, schmorl nodule or tumour [2,3]. Although limbus vertebra is known for a long time patients may be misdiagnosed because it has not a spesific symptom and it is not well- known by physicians. Especially it should be kept in mind in patients with low back pain after a trauma [3].



[Table/Fig-1]: Lateral spine radiograph: Fragment sclerotik of the anterosuperior portion of the L4 vertebra.



[Table/Fig-2]: Lumbosacral MRI; (A: T1-weighted image, B: T2-weighted image), also financed the hyperintense limbus fragment in T1 and T2 secance.

There are limited cases with limbus vertebra in the literature by now and these cases are usually accompanied by mechanical low back pain. According to our literature search (pub med, web of science) there is not any limbus vertebra case presenting with spondyloarthritis symptoms.

We reported a patient presented with inflammatory low back pain and diagnosed with anterior limbus vertebra because it is rare and the patient has atypical clinical presentation.

Limbus vertebra is frequently localized at anterosuperior margins of mid lumbar vertebra bodies but it also can be seen at the inferior and posterior margins and other vertebra levels [1]. It is thought that posterior limbus vertebra may cause nerve root compressions but anterior limbus vertebra is usually asymptomatic [3].

Limbus vertebra can be diagnosed by triangular bone fragment image seen on the plain radiography but it may be confused with vertebral fracture frequently. It should be considered that there is sclerotic margin of triangular fragment apart from acute fracture on plain radiography [1]. Additionally, limbus vertebra may also be confused with Schmorl nodule. Limbus vertebra is a marginal herniation despite Schmorl nodule is a central herniation into the vertebral end plate [4]. Especially limbus vertebra at level L5-S1 may be overlooked because of superposition of pelvic structures. MR is the most sensitive diagnostic method for limbus vertebra diagnosis [2]. The limbus vertebra is often misdiagnosed as a fracture, infection or tumour which may result in unnecessary invasive procedures [1,3].

Limbus vertebra is usually diagnosed incidentally and usually doesn't need treatment. Symptomatic patients are treated conservatively but if conservative treatment fails surgical treatment may be needed. Usually total laminectomy is necessary for sufficient excision of

limbus fragment [2]. Some researchers also used different surgical techniques [5,6]. Akhaddar A et al., has suggested excision of the mobile fragment and quit the stable fragment alone [7]. But some patients still have had pain after surgery in this method. Surgical treatment results are variable.

CONCLUSIONS

It should not be forgotten that limbus vertebra can be present with inflammatory low back pain symptoms and may be confused with spondyloarthropathy or malignancy. It is important to question patient for trauma history and to remember limbus vertebra possibility to avoid unnecessary diagnostic procedures and reaching the right diagnosis quickly.

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