

Lumbar Spondylolysis

Muhammad Faisal Khilji

CASE REPORT

A 39-year-old non-obese female with no known comorbidities came to the emergency department of a tertiary care hospital with complaint of severe lower back pain from the last two hours. She heard a click while bending down about two hours back. No history of trauma or fall. There was no complaint of any weakness or altered sensations of the lower limbs. Her bowel bladder control was fine. She was not involved in any sports. Clinical examination showed apparently normal lumbar lordosis, normal power and sensations of lower limbs with good anal tone on per rectal examination. As pain was not improved with maximum analgesia, X-ray lumbar spine (Figure 1) was done which showed pars interarticularis defect of L3 and L5 proving it to be a case of lumbar spondylolysis of L3 and L5. Patient later improved with stepped up analgesia (Diclofenac 75 mg, Tramadol 100 mg, Morphine 5 mg) and discharged with neurosurgery consult and instruction of avoiding heavy exercise.

DISCUSSION

Lumbar spondylolysis is the defect in pars interarticularis, which can be unilateral or bilateral. The term spondylolysis is derived from a Greek word for vertebra called spondylos and lysis meaning defect. Multiple level lumbar spondylolysis, as in our case, is a rare condition. Usually it is seen at the level of L4 or L5, it is rare in first three lumbar vertebrae [1]. Our case showed spondylolysis at L3 level also. Multiple lumbar spondylolysis varies from 1.2% to 5.6% [2, 3, 4]. Different etiologies have been proposed in the



Figure 1: X-ray lumbo-sacral spine. Arrows showing L3 and L5 Spondylolysis.

literature including, stress fracture, compression of pars articularis by articular process, pars articularis pathologies, stress fractures, pars articularis growth problems and different ossification centers [5]. The genetic and mechanical factors play an important role in the development of spondylolysis. Upright position and repetitive trauma have some role in the development of spondylolysis. It is reported in children when they begin to stand or walk. It is not seen in embryos, fetus or infants at birth [1]. The youngest patient reported for having lumbar spondylolysis was eight and half months old child. Those working in heavy industry or involved in contact sports are prone to develop this condition [6, 7]. Other sports associated with lumbar spondylolysis include, weight lifting, diving, gymnastics, rowing and throwing sports [8]. Computed tomography (CT), 3D

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Received: 19 June 2018

Accepted: 09 August 2018

Published: 11 September 2018

CT and magnetic resonance imaging (MRI) are more sensitive modalities for the diagnosis of this condition however simple flexion extension lumbar spine X-ray is all that is required for the diagnosis [9]. Back pain and or spinal deformity are the usual presenting complaints of this condition. Use of analgesia with or without transcutaneous electrical nerve stimulation improves symptoms in most of the patients. However use of acupuncture and physical therapy including use of Boston overlapping brace has also shown success in the treatment [10]. In severe cases treatment includes inter-segmental fixation with postero-lateral fusion of the involved vertebrae with the help of screws or bone grafts.

CONCLUSION

Lumbar spondylolysis should be suspected in patients presenting to ED with complaint of back pain, especially if there is history of repeated trauma.

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Keywords: Back pain, Lumbar, Spine, Spondylolysis

How to cite this article

Khilji MF. Lumbar Spondylolysis. *Int J Case Rep Images* 2018;9:100947Z01MK2018.

Article ID: 100947Z01MK2018

doi: 10.5348/100947Z01MK2018CL

Author Contributions

Muhammad Faisal Khilji – Substantial contributions to conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Guarantor of Submission

The corresponding author is the guarantor of submission.

Source of Support

None.

Consent Statement

Written informed consent was obtained from the patient for publication of this clinical image.

Conflict of Interest

Author declares no conflict of interest.

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