

Abstracts of the WCMSR

01. CONTIGUOUS LUMBAR BILATERAL PARS DEFECTS AT L3 AND L4 (WITH INTACT L5); TREATED WITH PEDICLE SCREW FIXATION AND INTERBODY FUSION: A CASE REPORT WITH LITERATURE REVIEW

Dr. Muhammad Rizwan Ali¹, Dr. Muhammad Jawad Saleem¹, Dr. Ali Shahid², Muhammad Suliman Sajid¹, Dr. Sheeza Ahmed¹, Muhammad Haris¹, Dr. Shayan Asmat¹, Noor Ul Subah Afzal¹, Khadija Waleed³.

¹Allama Iqbal Medical College, Lahore, Pakistan.

²Punjab Medical College, Faisalabad, Pakistan.

³Nawaz Shareef Medical College, Gujrat, Pakistan.

BACKGROUND: Pars defects of the lumbar spine are very frequently observed in athletes and adults as they are exposed to repetitive spine stress which may result in instability or spondylolisthesis. Although traumatic and degenerative pars defects are well-described in isolated form in literature, the presence of contiguous bilateral pars defects and at adjacent lumbar levels (L3, L4) with intact L5 due to different mechanisms as well is extremely rare. In order to plan surgical stabilization, one needs to be aware of the biomechanical interaction between pre-existing and recent defects.

THE CASE: We discuss here a case of a female who is in her forties with a two-year history of lower back pain secondarily to chronic degenerative L4 pars defect. She met with a roadside accident and presented in our hospital with acute lumbar pain and sensory deficits in the L3 and L4 dermatomes, but there was no bladder or bowel involvement. Radiographs showed that she had bilateral L4 pars defect (with grade 2 anterolisthesis) with contiguous bilateral L3 pars defect (traumatic in nature), but the L5 was still intact. L4 pars defect was termed as chronic and L3 was termed as acute. Chronicity of these defects was deduced based on clinical history and intraoperative observations since the patient presented in the emergency department and due to institutional constraints CT scan and MRI could not be contemplated. The patient was operated by means of the anterior pedicle screw fixation at the levels of L3-L5 and L4-L5 including the laminectomy, facetectomy, disc excision, and the insertion of the PEEK cages with bone graft. Postoperatively, she was mobilized and on the second day she was discharged. At two weeks' follow up, there was gradual sensory recovery, improved motor strength, and pain improved from VAS 8/10 to 2/10. Radiographs taken during this period revealed stable hardware, correct positioning and progressive interbody fusion.

CONCLUSION: This case underscores a fairly uncommon biomechanical pattern that shows existing degenerative and acute pars defects at adjacent levels. These were due to various mechanisms with sparing lumbosacral junctions. It was intended to be fixed with interbody fusion using posterior pedicle screw fixation. It offered pain relief, neurological recovery and stability of the spine. Awareness of such a typical presentation is very important in order to guide timely surgical intervention and optimum outcomes in patients with contiguous lumbar pars defects.

Key Words: Lumbar Vertebrae, Spondylolysis, Case Reports.

Figure or Table: No figure