SUMMARY

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The aim of this study was to review and re-evaluate the role of conventional radiography and CT in the assessment of spondylolysis and spondylolisthesis of the lumbo-sacral spine.

Spondylolysis is a cleft in the pars interarticularis with no slippage of the vertebral bodies. Spondylolisthesis is a displacement of one vertebral body over another with disruption of the pars interarticularis permitting slippage of the superior vertebra.

Clinical picture of these patients are variable, but the majority of cases present with one of the following presentations, no symptoms except occasional low back pain; chronic low back pain with no radicular symptoms; radicular symptoms with no nerve root compression with or without low backpain; radicular symptoms with neurologic deficit; intermittent claudication.

Spondylolisthesis has six types according to the classification proposed by Wiltse, Newmon & Macnab, the types are, dysplastic; isthmic; degenerative; traumatic; pathological; & post-operative. The most common type of them is the isthmic type.

The conventional plain X-ray's play an important role in the diagnosis of spondylolysis & spondylolisthesis.

Every patient, should be investigated by three views, we define them as the standard basic views in spondylolysis & spondylolisthesis, antroposterior view, oblique view (with or without cranial tilt) & erect lateral view.

In this thesis, we considered that the oblique view with cranial tilt is the most important single projection in spondylolysis and the standing lateral radiograph is the most important projection in spondylolisthesis, at the time of presentation.

When the diagnosis is confirmed, additional radiographic studies may be in order, such as flexion & extension lateral views to detect progression and instability. Authors considered that if there is 5% or more increase in the amount of slippage on dynamic views, spondylolisthesis is said to be progressive.

If the complaint of the patient is solely mechanical, the above mentioned radiographs are sufficient for evaluation, but if there is root symptoms, bowel or bladder dysfunction, physical evidence of root compression, myelography, CT. or combination of both is then be utilized.

Myelographic signs in spondylolisthesis are numerous, the most frequent is hour glass constriction. Other signs such as small indentation of the contrast column, or complete block caused by sever stenosis in degenerative spondylolisthesis may also be detected.

CT is lastly used to asses, the integrity of disc, ascertain spinal canal stenosis or to rule out intraspinal pathology in patients who do not have resolution of symptoms by non specific measures.