Lumbar degenerative spondylolisthesis diagnosis

Plain lumbosacral x-rayss: may disclose spondylolisthesis. AP diameter of canal is usually narrowed (congenitally or acquired) whereas the interpedicular distance (IPD) may be normal [1].

Plain lumbosacral x-rayss Oblique films may demonstrate pars defects. Adding flexion/extension views can assess “dynamic“ in stability.

Degenerative spondylolisthesis with lumbar stenosis is a well-studied pathology and diagnosis is most commonly determined by a combination of magnetic resonance imaging (MRI) and standing plain lumbosacral x-rays. However, routine upright imaging is not universally accepted as standard in all practices.

Routine standing lateral radiographs should be standard practice in order to identify degenerative spondylolisthesis, as nearly 1/3 of cases will be missed on supine MRI. This may have implications on whether or not an arthrodesis is performed on those patients requiring lumbar decompression. Flexion-extension radiographs demonstrated no added value compared to standing lateral xrays for the purposes of diagnosing degenerative spondylolisthesis [2].

Lumbar degenerative spondylolisthesis magnetic resonance imaging

Lumbar degenerative spondylolisthesis magnetic resonance imaging.

1)
Hawkes CH, Roberts GM. Neurogenic and Vascular Claudication . J Neurol Sci. 1978; 38:337–345
2)
Segebarth PB, Kurd MF, Haug PH, Davis R. Routine Upright Imaging for Evaluating Degenerative Lumbar Stenosis: Incidence of Degenerative Spondylolisthesis Missed on Supine MRI. J Spinal Disord Tech. 2014 Oct 28. [Epub ahead of print] PubMed PMID: 25353204.