Minimally Invasive Far Lateral Lumbar Interbody Fusion: A Review of the Technique, Indications and Preliminary Outcomes

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The current study was designed to describe the technique and to evaluate the efficacy of lumbar interbody fusion achieved due minimally invasive intertransverse process approach. This surgical via avoids the need for either intraabdominal dissection or violation of the spinal canal in accessing the disc space and it is indicated in selected lumbar pathologies as symptomatic degenerative disc disease or low grade of spinal instability that may require interbody fusion without spinal canal decompression. Twenty-three patients with single-level spinal instability or degenerative disc disease were identified and treated by this method. Visual analogue Scale (VAS) and Oswestry disability index (ODI) were used to assess back pain and functional outcome. Fusion was evaluated by CT scan achieved 6 months after surgery. The average follow-up period was 13 months. Clinical outcome was satisfactory in all patients; mean improvement of 5.7 points in VAS scores and 23.7% in the ODI was observed. Evidence of fusion was observed in all patients. In our experience far lateral lumbar interbody fusion technique achieved due minimally invasive intertransverse approach has shown the potential to reduce the rate of complications, the amount of intra-operative blood loss, the intensity of postoperative pain, and the duration of hospital stays. This kind of extraforaminal approach, when used in selected lumbar pathologies that do not require spinal canal decompression, allows to achieve a satisfactory results and it is a valid alternative to other fusion techniques.