

MINIMALLY INVASIVE PROCEDURE - SELECTIVE ENDOSCOPIC DISCECTOMY

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Aim: Minimally invasive lumbar spine surgery concept implies achieving clinical outcomes comparable to the standard microscopic technique while enabling faster recovery for the patients.

Method: Selective endoscopic discectomy (SED) is one of minimally invasive spine surgery techniques. The access to spine is kept to a minimum while paraspinal muscles and tissue are dilated rather than being cut thus avoiding muscle, tendons and soft tissue damage which are the main cause of the postoperative pain.

Results: Advantages of the minimally invasive spine surgery include: possibility of performing in local anaesthesia, shorter hospital stay, limited blood loss with consecutively reduced fibrous tissue development, faster return to work and everyday activities. From the economical point of view, this kind of treatment is considered to be a cost-effective intervention. The SED technique is based on the special designed endoscopes that provide excellent visualization for selective removal of a portion of the herniated nucleus pulposus with preservation of the healthy part of the disc and with less chance of intervertebral space collapse.

This surgical technique has steep learning curve due to requirement of the appropriate surgical tools and manual skills since surgeons must work in a narrow space. Understanding detailed anatomies and keeping precise surgical orientation are essential. The lack of depth perception and stereoscopic visualization associated with the use of the endoscope makes the learning curve much steeper.

Studies performed to compare this minimally invasive techniques to standard microsurgical discectomy have concluded that minimally invasive methods, apart from the parameters already mentioned as the advantages, do not provide different overall outcome.

Conclusion: The selective endoscopic discectomy is acceptable and effective alternative to standard microdiscectomy that offer less postoperative back pain and faster recovery.