

Lumbar disc prolapse accounts for only 5% of all low back pain problems but is the most common cause of radiating nerve root pain which called sciatica. In the 20th century, techniques were developed to remove the herniated disc with minimal invasiveness, with these minimally invasive techniques; authors demonstrated decreased soft tissue manipulation, operative time, blood loss, and hospital stay, allowing early recovery.

This is a prospective study carried in Sulaimaniyah Teaching hospital for 111 patients (72 male and 39 female) complained from lumbar disc prolapse from May 2010 till May 2015. Two different surgical discectomy procedures were done to these patients as follows:

- 1-Fenestration discectomy was performed to 53 patients through 2-5 cm skin incision.
 - 2-Hemilaminectomy and discectomy had done to 58 patients through skin incision 4-7 cm.
- The patients were evaluated preoperatively and 6 months postoperatively by PROLO score.

111 patients (72 male and 39 female with ratio 1.8:1) underwent surgical discectomy. The mean age of the patient was 36.2 ± 6.2 years. 53 patients (47.7%) underwent fenestration discectomy. The operation time was ranging from 48 – 92 minutes with mean operative duration 69.13 ± 8.96 minutes. The mean hospital stay was 1.31 ± 0.73 days ranging from 16 hours to 3days. According to PROLO score, fair results were reported in four (7%) patients while good result obtained in 12 patients (23%) and 37 patients (70%) showed excellent result. No patient expressed poor result.

58 patients (52.3%) underwent hemilaminectomy and discectomy. The operation time was ranging from 56 – 103 minutes with mean operative time 78.66 ± 10.31 minutes. The mean hospital stay was 2.46 ± 1.42 days ranging from 1 day to 10 days. According to PROLO score, 9 patients (16%) obtained fair results while good results obtained in 15 patients (26%) and excellent results founded in 34 patients (58%). No patient showed poor results.

Duration of the operation and hospital stay were significantly shorter in fenestration discectomy group than hemilaminectomy and discectomy one (P value less than 0.001). Through PROLO score both procedures showed significant improvement postoperatively in both economic and functional assessments. Most of our patients gain excellent results according to PROLO score in both surgical procedures. In this series 92% of patients treated with fenestration discectomy improved postoperatively with good or excellent score, while 85% of the patients treated with hemilaminectomy have that improvement. Both fenestration discectomy and hemilaminectomy with discectomy showed the same final postoperative outcome but the fenestration discectomy is superior since the operation duration, hospital stay are less and overall improvement is relatively better.