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An Assessment of Lumbar Intervertebral Disc Prolapse (PLID) Surgery

Dr. Md. Rezaul Karim[1*], Dr. Tapas Kumer Talukder[2], Dr. Md. Enamul Hoque[3], Dr. Md. Mahbub Hasan[4]

[1]Assistant Professor, Ortho-Surgery, National Institute of Traumatology and Orthopedic Rehabilitation (NITOR), Dhaka, Bangladesh
[2]Assistant Professor, Ortho-Surgery, Shaheed Ziaur Rahman Medical College, Bogura, Bangladesh
[3]Assistant Registrar, Ortho-Surgery, Shaheed Ziaur Rahman Medical College, Bogura, Bangladesh
[4]Resident Medical Officer, Ortho-Surgery, Shaheed Ziaur Rahman Medical College, Bogura, Bangladesh

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***Corresponding author:** Dr. Md. Rezaul Karim

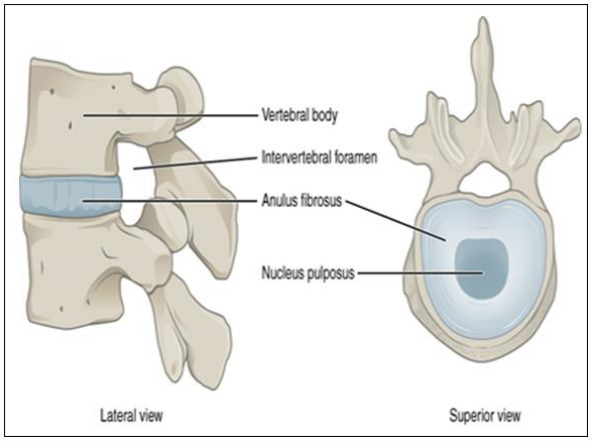
Abstract **Original Research Article**

Introduction: Prolapse of lumbar intervertebral discs (PLID) is a major cause of morbidity. Back pain and sciatica are very common in adult persons. More careful assessment must be done to treat these patients. Injudicious treatment, whether medical or surgical, may aggravate the sufferings. ***Objective:*** This study aim was to assess the Lumbar Interverterbral Disc Prolapse (PLID) surgery. ***Material & Methods:*** This was a descriptive type of study. The study period extends from October 1, 2017 to September 30, 2019 (Two years). The study was carried out in the Department of Orthopaedic Surgery, Shaheed Ziaur Rahman Medical College Hospital (SZMC), Bogura, Bangladesh. We used purposive sampling method. Among the total study population 74 (70.48%) were male and 31 (29.52%) were female. Age range was 20-59 years. Written informed consent was obtained in favor of all the participants before enrolling into the study. ***Results:*** A total of 105 patients were operated and observed periodically in outdoor. Most of them 70.48% of them were male. Majority 45.72% were aged between 30-39 years, 35.24% were in between 20-29 years age, 15.24% were in between 40-49 and 3.80% were aged between 50-59 years. preoperative symptomatology majority 47.62%) had radicular pain, 35.24% had low back pain and 17.14% patients had lower extremity numbness. Distribution of level of disk prolapse majority 55.25% were in between L4-L5 level. Outcome of operation where majority 92.38% of the patient had no pain. ***Conclusion:*** PLID surgery is not a routine surgery. Proper assessment of the patient must be done before going to operation.

Keywords: Prolapse of lumbar intervertebral discs (PLID), Orthopaedic Surgery, Disk Prolapse.

INTRODUCTION

Prolapse lumbar intervertebral disc (PLID), frequently envisage in clinic, and might often encourage low back and leg pain. The occurrence is 1.9%–7.6% in men, and 2.2%-5.0% in women [1]. Indicative PLID is generally preserved with nerve root decompression with conservation of bony and ligamentous stabilizers of the spine [2-5]. The complete disappointing rate after discectomy is 3 to 20% [3, 6-8]. Its reappearance at the similar level irrespective of ipsilateral or contralateral herniation next disc excision is reported to be 5 to 11% [3, 6, 7, 9, 10].



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Humans have been annoyed by back and leg pain subsequently the commencement of the recorded history. Oppenheins and Krause did the first successful surgical excision of a herniated intervertebral disc in 1909. Regrettably, they could not identify the excised tissue as disc material and interpreted it as an enchondroma [11]. Mixter and Barr [12] raised lumbar fusion after excision of the disc to prevent stableness. But Frymoyer *et al*., [13] and others indicate that there is little if any benefit to the addition of spinal fusion. Causes of failed surgery are wrong prolapses at the same level or another level. Prolapse of lumbar intervertebral discs (PLID) is a major cause of morbidity.

OBJECTIVES

a) General objective

- To assess the Lumbar Interverterbral Disc Prolapse (PLID).

b) Specific Objectives

- To identify the Lumbar Interverterbral Disc Prolapse (PLID) surgery.
- To observe the Lumbar Interverterbral Disc Prolapse (PLID) surgery.

METHODOLOGY AND MATERIALS

This was a descriptive type of study. The study period extends from October 1, 2017 to September 30, 2019 (Two years). The study was carried out in the Department of Orthopaedic Surgery, Shaheed Ziaur Rahman Medical College Hospital (SZMC), Bogura, Bangladesh. We used purposive sampling method to finalize the sample. Among them 74 (70.48%) were male and 31 (29.52%) were female. Age range was 20-59 years. Written informed consent was obtained in favor of the participants before enrolling into the study. A total number of 105 patients were included in the study. Most of the patients obtainable with back pain and sciatica with no positive history of trauma or weight lifting. Diagnosis was confirmed by MRI. According to the inclusion Criteria of the study, only the patients, who were medically fit to undergo the full treatment procedure, were included in the study. On the other hand, according to the exclusion criteria of this study, over aged geriatric patients as well as severely ill patients were excluded from the study.

RESULTS

A total of 105 patients were operated and observed periodically in outdoor. Figure-1 show the gender distribution of the patients which shows that, most of them 70.48% were male and 29.52% were female. Table-1 shows the majority 45.72% were aged between 30-39 years, 35.24% were in between 20-29 years age, 15.24% were in between 40-49 and 3.80% were aged between 50-59 years. The distribution of preoperative symptomatology Table-2 shows that, majority 47.62%) had radicular pain, 35.24% had low back pain and 17.14% patients had lower extremity numbness. Table-3 shows the distribution of disc prolapse according to side where majority 57.14% of the patients were left sided, 36.20% patients were right sided and 6.66% were bilateral sided. Distribution of level of disk prolapse, shown in Table-4 reflects that, 07.62% were in between L2-L3, 13.33% were in between L3-L4, 55.25% were in between L4-L5 and 23.80% were in between L5-S1 level. Table-5 shows the outcome of operation where majority 92.38% of the patient had no pain and the rest 7.62% had occasional back pain.

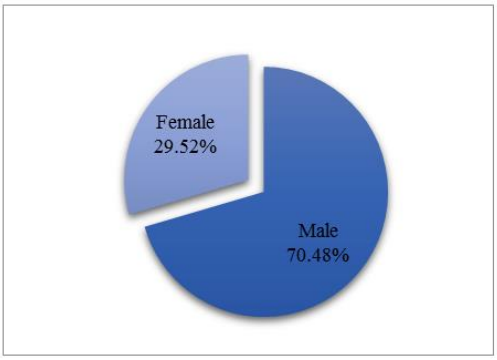

Fig-1: Gender distribution of the studied participants (n=105)

Table-1: Distribution of patients according to age (n=105)

Age in years	N	%
20-29	37	35.24
30-39	48	45.72
40-49	16	15.24
50-59	4	03.80
Total	100	100

Table-2: Distribution of Preoperative Symptomatology (n=105)

Variables	N	%
Radicular pain	50	47.62
Low back pain	37	35.24
Lower extremity numbness	18	17.14
Total	100	100

Table-3: Distribution of disc prolapse according to side (n=105)

Side	N	%
Right	38	36.20
Left	60	57.14
Bilateral	7	06.66

Table-4: Distribution of level of disk prolapse (n=105)

Variables	N	%
L2-L3	8	07.62
L3-L4	14	13.33
L4-L5	58	55.25
L5-S1	25	23.80

Table-5: Outcome of operation (n=105)

Variable	N	%
No pain	97	92.38
Occasional back pain	8	07.62

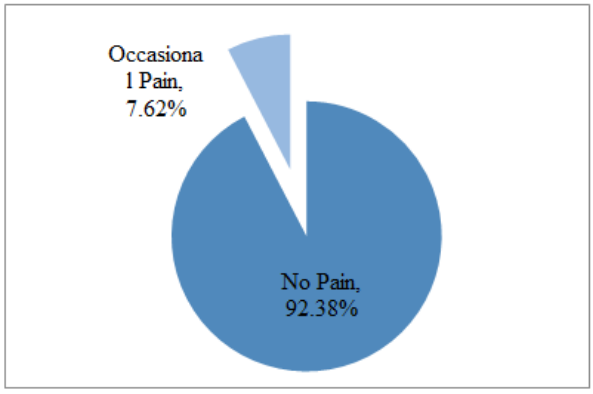

Fig-2: Pie chart shows the outcome of operation (n=105)

DISCUSSION

To get good result of disc surgery, patient selection needs to be appropriate. The ideal patient selection process is choosing those patients with unilateral leg pain spreading below the knee that has been existing at least for 6 weeks. The pain must reduce by rest and anti-inflammatory medication but then again should have given back to the early level after a minimum of 6 weeks of traditional treatment [11]. Physical investigation must disclose symptoms of sciatic irritation and perhaps impartial sign of localizing neurological damage. CT, MRI or myelography had better authorize the level of participation constant with patient's investigation results. From the preoperative symptomatology of our study findings we have seen that, majority 47.62% had radicular pain, 35.24% had low back pain and 17.14% patients had lower extremity numbness**.** If traditional treatment miscarries, the following consideration is surgical involvement. In cooperation the surgeon and the patient must appreciate that disc surgery is not a cure, only can deliver symptomatic relief. It doesn't stop the pathological procedure that lets herniation to arise also doesn't return to a usual state. Patient have to exercise good posture and body mechanics after surgery. From our study findings we have seen that, 92.38% of the patient had no pain and 7.62% had occasional back pain after disk surgery. A study done by Spang fort in reviewing 2504 lumbar disc excisions shows that 30% of the patient complained back pain after disc surgery [14] which contradicts our findings. In our study, the total outcome was very good as we carefully chosen the patients systematically tracked standard technique of operation, postoperative management was good and we discharged the patients after giving mandatory recommendation.

LIMITATIONS OF THE STUDY

It was a descriptive type of study with small sample size, which doesn't reflect the scenario of the whole country.

CONCLUSION AND RECOMMENDATIONS

PLID surgery is not a routine surgery. Proper assessment of the patient must be done before going to operation. Clinical improvement must be done before operation for good result. Psychiatric assessment should also be done before surgery. From our study we can conclude that if the patients are selected properly, operated classically, managed appropriately after operation and discharged with required advice, classical discectomy can give good result.

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