

Functional Recovery in Patients with Lumbar disk herniation : Conservative Treatment versus Early Surgical Intervention

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Introduction

- Lumbar disk herniation is one of the most common causes of job related disability in individuals less than 45 years old.
- Conservative treatment is the initial pathway for majority of patients with favorable outcome but the duration of conservative treatment and the early surgery are still debatable issues

(Gregory et al., 2008 and Taher et al., 2012).

Introduction

- **There are limited evidence-based conclusions regarding optimal treatment**
 - **Early surgery is still debatable and may be limited to progressive neurological deficit and Cauda equina**
 - **Early physiotherapy is still controversial**
 - **Duration of the conservative treatment is still questionable**



Aim of the work

Evaluation of the functional and disability outcome after conservative treatment with prolonged physiotherapy program versus the early surgical intervention in patients with recently diagnosed lumbar disc herniation



Patients and methods

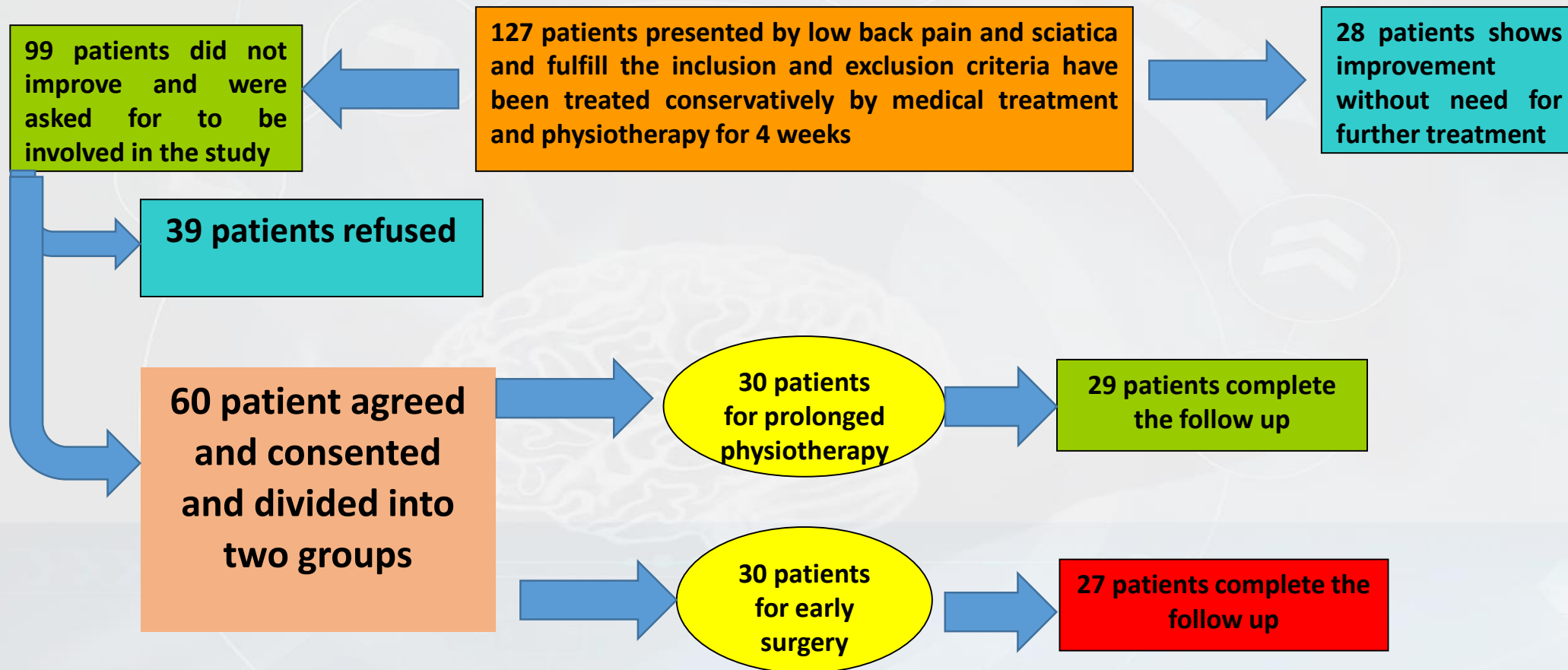
This study was conducted on fifty six patients with recent onset lumbar disc herniation and failed conservative treatment for one month

The patient were randomized into two groups

Group (1): 30 patients were randomized for prolonged physiotherapy program one of them lost during follow up

Group (2): 30 patients were randomized for early surgical treatment (three patient lost during the follow up

Patients and methods



Flow diagram of participants

Patients and methods

- The Oswestry disability index (ODI) was used to assess Disability
- Prolo outcome rating scale was used to assess: the work status

Grade	Description
Grade 5 (Excellent)	Able to work at previous occupation
Grade 4(Good)	Able to work at previous occupation but part time
Grade 3(Fair)	Able to work but not at previous occupation
Grade 2(poor)	Unable to work but able to do the daily social activity
Grade 1(Bad)	Complete invalid

- Section 1 – Pain Intensity
- Section 2 – Personal Care (washing, dressing, etc.)
- Section 3 - Lifting
- Section 4 – Walking
- Section 5 – Sitting
- Section 6 – Standing
- Section 7 – Sleeping
- Section 8 – Sex life (if applicable)
- Section 9 – Social Life
- Section 10 – Traveling

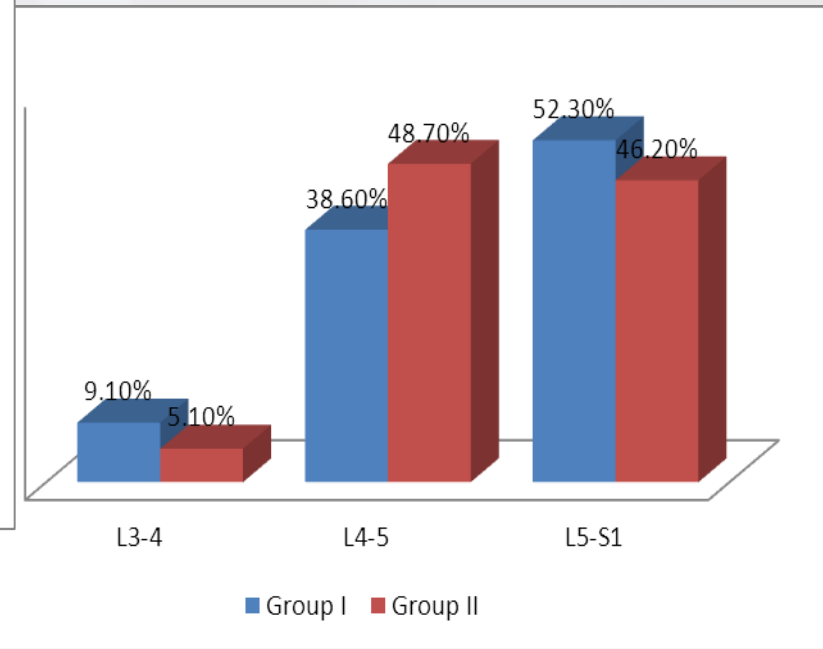
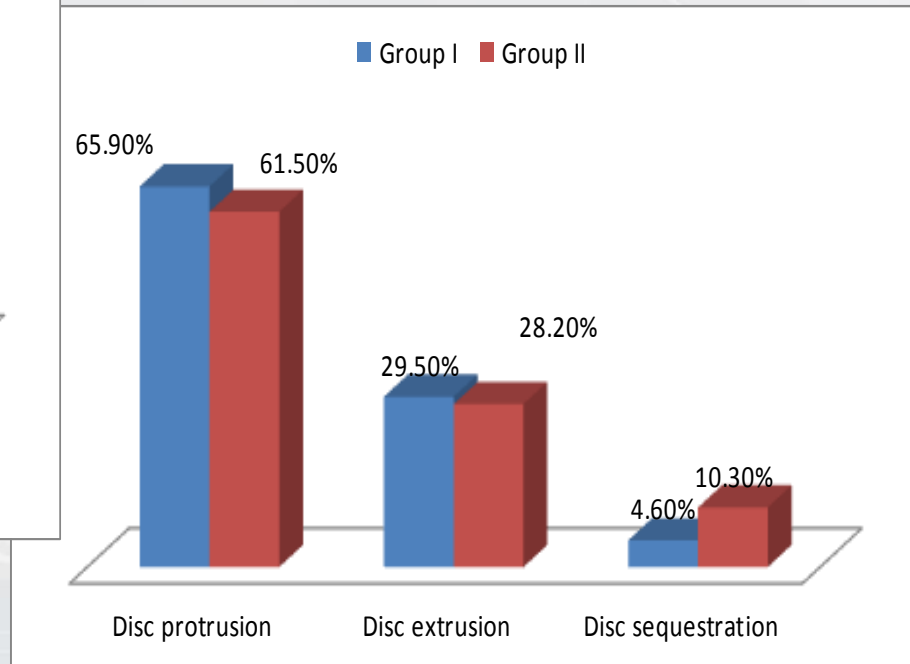
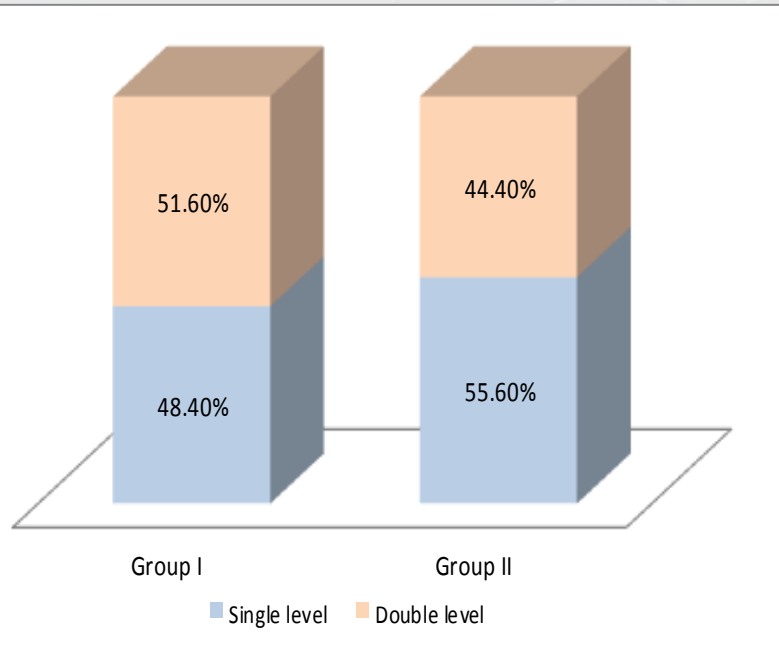
Follow up and Evaluation of the Outcome

Results

	Group I(N=29)	Group II (N=27)	P-Value
Age:(years) Mean ± SD	34.48 ± 7	37.37 ± 7	0.13
Sex (Male/female)	23(79.3%)/6(20.7%)	22(81.5%)/5(18.5%)	0.84
Risk factors			
BMI (mean ± SD)	28.4±3.6	28.2±5.9	0.89
Smoking Index(mean ± SD)	138±49.4	144±50.6	0.37
Diabetic patients N(%)	4(13.8%)	4(14.8%)	0.91
Heavy workers N(%)	14(48.3%)	14(51.6%)	0.51
Disability			
ODI	60.66±9.7	62.2±15.8	0.09
Moderate Disability	3(10.3%)	1(3.7%)	0.17
Sever Disability	17(58.6%)	16(59.3%)	0.19
Crippled	9(31%)	10(37%)	0.09

patient criteria

Results



Radiological Findings

Results

	First assessment	Second assessment	Third assessment
Group I (N=29)	60.66±9.7	30.62±17.54**	29.1±15.4**
Group II (N=27)	62.2±15.8	37.48±18.05**	32.9±15.5**
P	.09	.06	.3

Statistically significant improvement in both groups when comparing the second versus first assessment (p value = 0.001 for both groups).

Statistically significant improvement in both groups when comparing third versus the first assessment (p value = 0.001 for both groups) .

NO statistically significant difference in patients of group I and in patients of group II when comparing the third versus second assessment (p=0.58and 0.13respectively).

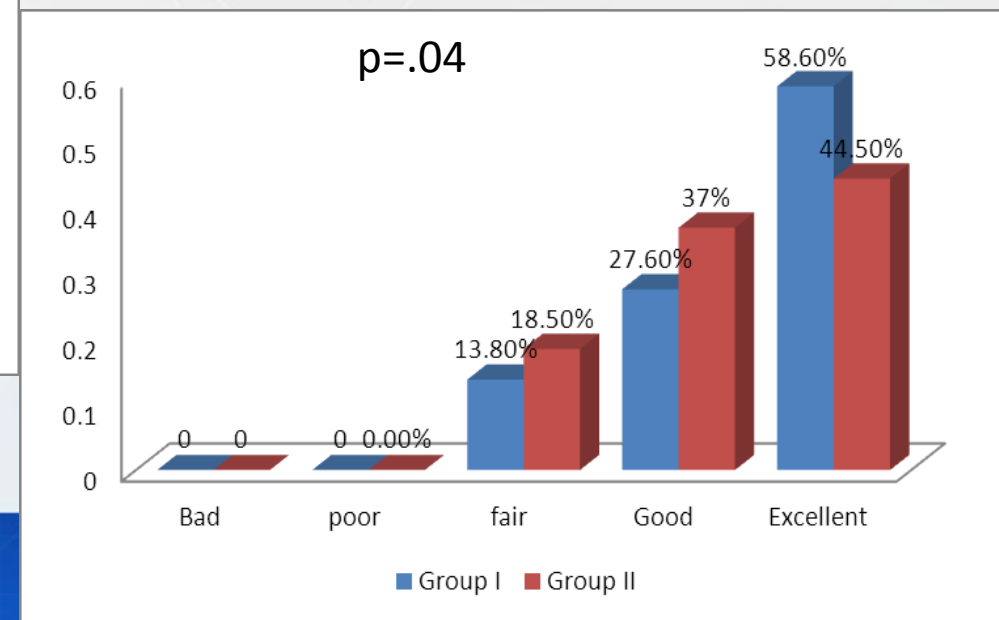
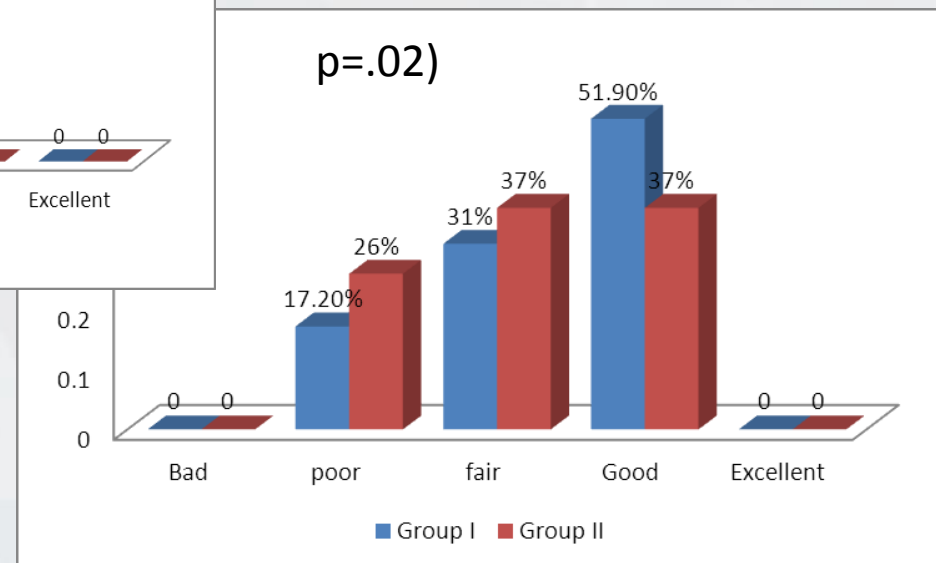
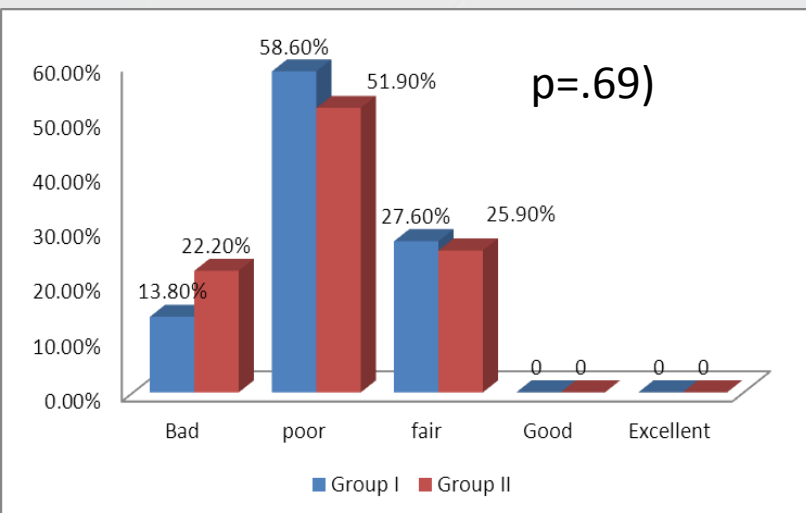
Disability Outcome

Outcome

	First assessment	Second assessment	Third assessment
Group I (N=29)	2.13±0.7	3.93±0.7**	4.4±0.3**
Group II (N=27)	2.03±0.9	3.1±1.1*	3.9±0.4+**
P	0.69	0.03	0.05

Prolo economic outcome rating scale

Prolo economic outcome rating scale



Conclusions

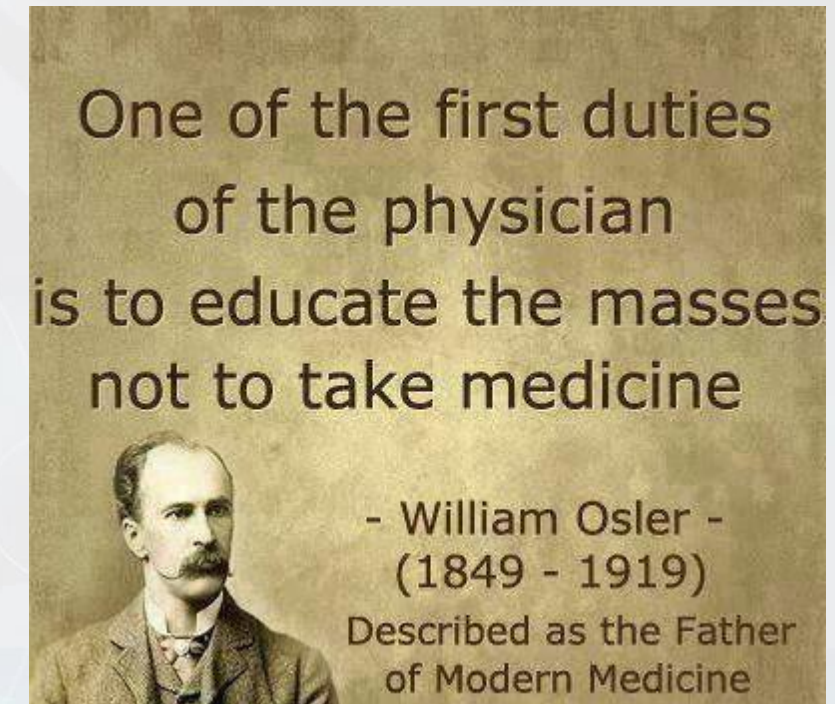
- Prolonged Physical therapy is beneficial and successful modality for treatment of acute lumbar disk herniation
- Conservative treatment can be extended up to 6 month
- No difference of Disability improvement at three and 6 months
- Short term outcome of Prolonged Physical therapy has better functional outcome than early surgery

Limitations

- Small number of cases
- Short term follow up

Recommendations

- **Prolonged physical therapy is recommended for 3 to 6 months**
- **Health education for recently diagnosed lumbar disk herniated patients about the expected benefits and drawbacks of early surgical intervention as well as the benefits of early and prolonged physical rehabilitation.**
- **Further multicenter study with longer follow up period is needed**





Thank You