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Original Research Article

Comparative Study between Effects of Pelvic Traction Vs without Pelvic Traction during the Management of PLID Patient at Dhaka Medical College Hospital

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Abstract: ***Background:*** One of the most common conditions is PLID (prolapsed lumbar intervertebral disc, chronic lumbar back discomfort caused by disorders of the vertebral column in the elderly low back pain, sciatica, quadra equines syndromes, nerve root compression causes radicular pain and, as a result, neurological impairment that leads to radiating pain up to whole lower limb. Traction has been used as a mechanical intervention since antiquity Since Hippocrates' day, various techniques of spinal traction have been documented for pain management. ***Objective:*** To compare effect of with or without pelvic traction during the management of PLID patient**.** ***Method:*** Randomized Clinical Trial The research was conducted at Dhaka Medical College Hospital's Department of Physical Medicine and Rehabilitation in Dhaka, Bangladesh. All the patients who were presented with PLID in an 18 to 50 years old age group, both sexes attending in Dhaka Medical College Hospital's Department of Physical Medicine and Rehabilitation were included as study population. A total of 70 people were diagnosed with PLID and were treated. Fulfilled the selection criteria were taken as study population and divided into two groups of 35 patients. ***Results:*** Among the 70 patients the bulk of the patients in group A were between the ages of 41 and 50. 16 (45.7%) and in group B, the bulk of the patients were between the ages of 41 and50, with 14(40.0%) instances falling into this category. There was no statistically significant difference in age between these two groups (p=0.050). Males were more prevalent than females in group A, with 25(71.4%) instances. The difference between these two group was not statistically significant (p=0.314). The mean score of Schober's test before treatment were 3.8 ± 0.7 and 3.6 ± 0.7 (p=0.418). The mean score of Schober's test 2 weeks after treatment were 4.8 ± 0.8 and 4.5 ± 0.6 (p=0.082). The mean score of Schober's test 4 weeks after treatment were 5.2 ± 0.8 and 4.7 ± 0.7 (p=0.012). The mean score of Schober's test 6 weeks after treatment were 5.8 ± 0.9 and 5.3 ± 0.8 (p=0.015). The mean score of VAS before treatment were 8.6 ± 1.1 and 8.9 ± 0.9 (p=0.302). The mean score of VAS in 2 weeks after treatment were 5.8 ± 1.1 and 6.4 ± 1.1 (p=0.022). The mean score of VAS in 4 weeks after treatment were 3.3 ± 0.9 and 4.3 ± 1.1 (p=0.001). The mean score of VAS in 6 weeks after treatment were 1.4 ± 1.5 and 2.9 ± 1.4 (p=0.001). ***Conclusion:*** This study was done on very small, selected admitted patients in department of medicine, Dhaka Medical College Hospital.Pelvic traction reduces the pain in patients with PLID by reduction of VAS score and increment of Schober's test score. The efficacy of continuous traction for low back pain is very effective among the PLID patient.

Keywords: Pelvic traction, PLID, LBP.

INTRODUCTION

Lower back discomfort, numbness, tingling, a "pins and needles" sensation, and muscle weakness can all be symptoms of a prolapsed lumbar disc. This ailment is also known as a herniated or ruptured disc, and it is usually caused by natural, age-related wear and

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tear. It can affect persons of all ages, although it is most common in those between the ages of 35 and 45. (Perry M.) Most lumber disc prolepses are found on the lateral side of the spine and cause symptoms from one or two spinal roots. The prolapsed disc tissue may compress the caudal equine, which runs from the lower half of the second lumber vertebra to the anterior and posterior roots of the spinal neurons L2 to S5 (Spannare BJ, 1978). Low back pain, whether with or without sciatica, is a leading cause of morbidity worldwide (Akbar and Mahar 2002). Clinically serious sciatica owing to disc prolapse, on the other hand, affects 4-6 percent of the population (Shakoor *et al.*, 2010). In more than 90% of instances, intervertibral disc degeneration caused by a combination of causes can result in herniation, particularly at the L4-L5 and L5-S1 levels (Akbar and Mahar 2002). The majority of herniation remains in the L3-L4 and L2-L3 segments (Peterson and Renstrom 2001). The existence of pain, radiculopathy, and other symptoms is dependent on the location and severity of the herniation. A thorough medical history, physical examination, and neuroimaging can help distinguish herniated lumbar disc prolapse from other causes of low back pain and sciatica (Akbar and Mahar 2002). Sciatic discomfort (and anterior crural pain in upper disc disorders) is now widely acknowledged to be caused by direct impingement of a prolapse on a nerve root, rather than'referred' discomfort from disordered joints or subluxated vertebrae (Logue 1953). Due to the variability of the patient population and the lack of a clear and useful approach, chronic low back pain is poorly understood and inadequately treated. It also results in job losses, which have increased more rapidly in recent years than any other frequent kind of disability (Ahmed *et al*., 2009). Sciatic discomfort (and anterior crural pain in upper disc disorders) is now widely acknowledged to be caused by direct impingement of a prolapse on a nerve root, rather than'referred' discomfort from disordered joints or subluxated vertebrae (Logue 1953). Due to the variability of the patient population and the lack of a clear and useful approach, chronic low back pain is poorly understood and inadequately treated. It also results in job losses, which have increased more rapidly in recent years than any other frequent kind of disability (Ahmed *et al.*, 2009). The diagnosis is made based on the patient's medical history and a physical examination during which the pain is replicated. X-rays may reveal disk degeneration and facet arthritis, but the diagnosis is made on the basis of clinical evidence. Treatment is directed toward the cause of pain. Either flexion or extension is prescribed on this basis. Body mechanics continue to be mandatory to improve posture and modify standing and working positions (Cailliet 1990). Traction has been used as a mechanical intervention since antiquity. Today, traction continues to be a widely used treatment option for those suffering from back and leg discomfort (Cailliet 1990). Patients who have radiating pain and/or paresthesia that does not improve with trunk motions are candidates for traction treatment. The patient can be in either a prone or supine posture, with the traction belts pulling on the front or posterior aspects of the joint. Mechanical traction can be applied in a static or intermittent manner. Recommendation for the treatment sessions might last anywhere from a few minutes to 40 minutes (Pellecchia 1994). Traction, on the other hand, can be a very useful and beneficial type of treatment when performed correctly and under the right circumstances (Saunders 1979). According to a recent UK-wide survey, 41% of therapists used traction with 5% of LBP patients, who almost exclusively presented with 'nerve root' problems; 3-10% of LBP sufferers will experience'sciatica' or 'nerve root' pain, with or without neurological signs, with 90% of them recovering, but 10% requiring surgery (Harte *et al*., 2007). For spinal diseases, lumbar traction has been used since prehistoric times. Its pain-relieving technique appears to separate the vertebrae, decrease pressure or contact forces from wounded tissue, promote peripheral circulation through massage, and lessen muscular spasms (Hasan *et al.,* 2009). The goal of this study was to compare the effects of pelvic traction with no pelvic traction in the treatment of PLID.

OBJECTIVE

To observe the comparison effect between the pelvic traction and without pelvic tractionin the management of PLID patient

METHODOLOGY

This experiment was set up as a randomized control trial (RCT). The research was conducted at Dhaka Medical College Hospital's Department of Physical Medicine and Rehabilitation. The research was carried out for six months, from November 2013 to April 2014. The study population included all patients with PLID in the age range of 18 to 50 years of both sexes who visited the Department of Physical Medicine & Rehabilitation at Dhaka Medical College Hospital in Dhaka. The study population consisted of 70 patients who were diagnosed with PLID and met the eligibility criteria. They were split into two groups: research group (Group A) and control group (Group B) (Group B). Each group consisted of 35 patients. Patients were selected by randomized sampling method. Incorporation of the patients in the two groups was performed by lottery. The sample size was calculated by the following formula (Steves K. Thompson). The sample size had been calculated to accurately measure a certain proportion at a specific level of statistical significance.

To determine the sample size, the formula is used;

$$n = \frac{z^2 pq}{d^2}$$

Where,

n= the desired sample size which would help to measure the different indicators

z= the standard normal deviate, usually set at 1.96 at 5% level which corresponds to 95% confidence level.
p=0.0774 (The prevalence rate of PLID is 7.74%17)
q=1-p=1-0.0774=0.9226
d= is the degree of accuracy level considered as 9.0%.
Putting the values in the above equation the sample size n is estimated as
n= 34 (Estimated sample size)

In these study 35 patients fulfilling the inclusion and exclusion criteria was enrolled in each group.

SELECTION CRITERIA OF SUBJECTS

Inclusion criteria

- PLID patient with the complaints of
- Low back pain radiating below the knee (one or both limbs), with leg pain often being severe than back pain
- Pins and needles in the distal dermatome
- Chronic ridiculer pain in the L4, L5, or S1 dermatome, with or without a slight neurological deficiency
- Severe, debilitating leg pain lasting 6–12 weeks
- Achieved a positive result on the straight leg raising test
- Presence of intradiscal-nuclear hearniation (bulge) and protrusion in MRI.
- Between the ages of 18 and 50
- Both men and women
- Patients who agreed to take part in the clinical trial and granted their approval.

Exclusion criteria

- Patients with Cauda equina syndrome or severe paresis
- Any history of trauma or fracture or spinal surgery
- Spondylo-arthrpathy, infection of spine, like TB, osteomyelitis, pyogenic infection.
- Spinal tumour or secondary metastases
- Multiple myeloma, spinal osteoporosis
- Long term oral steroid intake
- Pregnancy
- History of major psychiatric illness;
- Patients not agreed to the assigned programme of treatment
- Presence of extrusion and sequestration in MRI.

Data collection and Analysis

All data was meticulously compiled and edited. The data was filtered and validated for missing values and inconsistencies. All omissions and inconsistencies were meticulously fixed and eliminated. With the use of relevant methodologies and systems, computer-based statistical analysis was carried out. All data was carefully captured in a pre-made data collection form (questionnaire), with quantitative data expressed as mean and standard deviation and qualitative data expressed as frequency distribution and percentage.

Data on a categorical scale was compared between groups using Chi-square (X2) or Fisher's Exact Probability test, whilst data on a quantitative scale was compared using Student's "t" test. For each and every analytical test, statistical significance was defined as a probability (p) value of 0.05 (p0.05), p0.01 as very significant, and p>0.05 as non-significant. Statistical analysis was carried out using Statistical Packages for Social Sciences (SPSS-17), a window-based computer program (SPSS Inc, Chicago, IL, USA). The confidence level was set at 95%. The summarized information was then interpreted and presented in the form of tables.

RESULTS

A total number of 70 PLID patients were recruited for this study of which 35 patients were in study group (group A) who were treated with pelvic traction and the rest 35 patients were in the control group (group B) who were treated without pelvic traction.

Table-1: Age distribution of the patients

Age	Group		p value
	Group A	Group B	
≤30	5 (14.3)	9 (25.7)	
31 - 40	14 (40.0)	12 (34.3)	
41 - 50	16 (45.7)	14 (40.0)	0.374
Total	**35 (100.0)**	**35 (100.0)**	
Mean ± SD	39.0 ± 7.8	37.3 ± 8.1	

Student t-test was done to measure the level of significance

In Table1 shows the age distribution of the patients, In group A, majority of the patients were in the age group of 41 to 50 years which was 16 (45.7%) cases followed by 31 to 40 years group and less than or equal to 30 years age group which were 14(40.0%) cases and 5(14.3%) cases respectively. In group B, majority of the patients were in the age group of 41 to 50 years which was 14 (40.0%) cases followed by 31 to 40 years group

and less than or equal to 30 years age group which were 12 (34.3%) cases and 9(25.7%) cases respectively. The mean±SD age of the patients was 39.0±7.8 and 37.3±8.1 in group A and group B respectively. The difference of age between these two groups was not statistically significant (p<0.050).

Table-2: Gender distribution of the patients

Gender	Group		p value
	Group A	Group B	
Male	25 (71.4)	21 (60.0)	0.314
Female	10 (28.6)	14 (40.0)	
Total	**35 (100.0)**	**35 (100.0)**	

Chi-square test was done to measure the level of significance

In Table-2 shows the distribution of patients according to gender. In group A male was predominant than female which was 25(71.4%) cases and 10(28.6%) cases respectively. In group B male was also predominant than female which was 21(60.0%) cases and 14(40.0%) cases respectively. The difference between these two group was not statistically significant (p=0.314).

Table-3: Distribution of Study Population according to Occupation

Occupation	Group		p value
	Group A	Group B	
House wife	9 (25.7)	6 (17.1)	0.420
Farmer	8 (22.9)	4 (11.4)	
Services	6 (17.1)	12 (34.3)	
Business man	6 (17.1)	5 (14.3)	
Student	5 (14.3)	5 (14.3)	
Hawkers	1 (2.9)	1 (2.9)	
Driver	0 (.0)	2 (5.7)	
Total	**35 (100.0)**	**35 (100.0)**	

Chi-square test was done to measure the level of significance

Table 3 shows distribution of patients according to occupation. In group A most of the patients were housewife which was 9 (25.7%) cases followed by farmer, Services, Businessman and Student which was 8 (22.9%) cases, 6 (17.1%) cases, 6 (17.1%) cases and 5 (14.3%) cases respectively. In group B most of the patients were services which was 12(34.3%) cases followed by housewife, businessman, student and farmer which was 6(17.1%) cases, 5(14.3%) cases, 5(14.3%) cases and 4(11.4%) cases respectively. The differences of occupation among the two groups were not statistically significant (p=0.420).

. **Table-4: Distribution of the patients according to complain**

Complain	Group		p value
	Group A	Group B	
Duration of pain in days (Mean ± SD)	33.4 ± 12.3	37.0 ± 16.0	0.297
Radiation of pain			0.182
Knee [n (%)]	3 (8.6)	0 (.0)	
Leg [n (%)]	20 (57.1)	24 (68.6)	
Toes [n (%)]	12 (34.3)	11 (31.4)	
Character of pain			0.112
Constant [n (%)]	7 (20.0)	13 (37.1)	
Intermittent [n (%)]	28 (80.0)	22 (62.9)	
Relieving factors			0.452
Rest [n (%)]	30 (85.7)	32 (91.4)	
Lying flat [n (%)]	5 (14.3)	3 (8.6)	
Severity			0.056
Mild [n (%)]	2 (5.7)	1 (2.9)	
Moderate [n (%)]	19 (54.3)	10 (28.6)	
Severe [n (%)]	14 (40.0)	24 (68.6)	

Chi-square test was done to measure the level of significance; figure with parenthesis indicates percentage

In table 4 shows distribution of patients according to complain. The mean (±SD) duration of pain was 33.4±12.3 days and 37.0±16.0 days in group A and group B respectively (p=0.297). LBP with radiation to leg was in most of the cases in both groups which was 20 (57.1%) cases and 24 (68.6%) cases in group A and group B respectively (p=0.182). LBP was intermittent in most of the cases in both groups which was 28 (80.0) cases and 22 (62.9%) cases in group A and group B respectively (p=0.112). Most of the patients got relieve while resting which was 30(85.7%) cases and 32 (91.4%) cases in group A and group B respectively (p=0.452). Pain was severe in 24 (68.6%) cases of group B and 14 (40.0%) cases of group A; however, pain was Moderate in 19 (54.3%) cases of group A and 10 (28.6%) cases of group B (p=0.056).

Table-5: Distribution of the patients according to aggravating factor

Aggravating factor	Group		Total
	Group A	Group B	
Prolonged working	28 (30.4)	17 (14.0)	45 (21.1)
Leaning forward	28 (30.4)	25 (20.7)	53 (24.9)
Coughing	17 (18.5)	20 (16.5)	37 (17.4)
Sneezing	9 (9.8)	19 (15.7)	28 (13.1)
Prolonged standing	7 (7.6)	17 (14.0)	24 (11.3)
Menstruation	2 (2.2)	8 (6.6)	10 (4.7)
Prolonged sitting	1 (1.1)	15 (12.4)	16 (7.5)

Student t-test was done to measure the level of significance; TC=total count

In table-5 shows the aggravating factor of the patients. Prolonged working (30.4%), leaning forward (30.4%) were the main aggravating factors in most of the case the aggravating factor of the patients. Prolonged working (30.4%), leaning forward (30.4%) were the main aggravating factors in group A whereas leaning forward (20.7%), coughing (16.5%), sneezing (15.7%), prolonged working (14.0 %) and prolonged standing (14.0 %) were the main aggravating factors in group B.

Table-6: Distribution of the patients according to laboratory investigation

Laboratory investigation	Group		p value
	Group A (Mean ± SD)	Group B (Mean ± SD)	
TC (x10^3 per mm^3)	7.7 ± 1.0	7.6 ± 1.2	0.638
ESR mm in 1st hr	13.4 ± 5.1	14.9 ± 4.0	0.266
HB gm/dl	12.4 ± 1.3	11.9 ± 1.4	0.215
RBS (mmol)	5.9 ± 1.6	5.5 ± 0.7	0.213
Serum creatinine (mg/dl)	0.8 ± 0.2	0.9 ± 0.2	0.289

Student t-test was done to measure the level of significance; TC=total count

In table-6 shows laboratory investigation of the patients. The mean total count (x103 per mm3) was 7.7 ± 1.0 . The mean ESR (mm in 1st hr) was 13.4 ± 5.1. The HB (gm/dl) was 12.4 ± 1.3. The RBS (mmol) was 5.9 ± 1.6. The Serum creatinine (mg/dl) was 0.8 ± 0.2. laboratory investigation of the patients. The mean total count (x103 per mm3) was 7.7 ± 1.0 and 7.6 ± 1.2 in group A and group B respectively (p=0.638). The mean ESR (mm in 1st hr) was 13.4 ± 5.1 and 14.9 ± 4.0 in group A and group B respectively (p=0.266). The HB (gm/dl) was 12.4 ± 1.3 and 11.9 ± 1.4 in group A and group B respectively (p=0.215). The RBS (mmol) was 5.9 ± 1.6 and 5.5 ± 0.7 in group A and group B respectively (p=0.213). The Serum creatinine (mg/dl) was 0.8 ± 0.2 and 0.9 ± 0.2 in group A and group B respectively (p=0.289.

Table-7: Outcome of the patients according to Schober's test

Assessment by Schober's test	Group		p value
	Group A (Mean ± SD)	Group B (Mean ± SD)	
Pre treatment	3.8 ± 0.7	3.6 ± 0.7	0.418
2 weeks after treatment	4.8 ± 0.8	4.5 ± 0.6	0.082
4 weeks after treatment	5.2 ± 0.8	4.7 ± 0.7	0.012
6 weeks after treatment	5.8 ± 0.9	5.3 ± 0.8	0.015

Student t-test was done to measure the level of significance

In table-7 outcome of patient assessed by Schober's test. The mean score of Schober's test before treatment were 3.8 ± 0.7 and 3.6 ± 0.7 (p=0.418). The mean score of Schober's test 2 weeks after treatment

were 4.8 ± 0.8 and 4.5 ± 0.6 (p=0.082). The mean score of Schober's test 4 weeks after treatment were 5.2 ± 0.8 and 4.7 ± 0.7 (p=0.012). The mean score of Schober's test 6 weeks after treatment were 5.8 ± 0.9 and 5.3 ± 0.8 (p=0.015).

Table-8: Outcome of the patients according to VAS

Assessment by Visual analogue scale	Group		p value
	Group A (Mean ± SD)	Group B (Mean ± SD)	
Pre treatment	8.6 ± 1.1	8.9 ± 0.9	0.302
2 weeks after treatment	5.8 ± 1.1	6.4 ± 1.1	0.022
4 weeks after treatment	3.3 ± 0.9	4.3 ± 1.1	0.001
6 weeks after treatment	1.4 ± 1.5	2.9 ± 1.4	0.001

Student t-test was done to measure the level of significance

In table-8 shows shows outcome of patient assessed by visual analogue scale (VAS). The mean score of VAS before treatment were 8.6 ± 1.1 and 8.9 ± 0.9 (p=0.302). The mean score of VAS in 2 weeks after treatment were 5.8 ± 1.1 and 6.4 ± 1.1 (p=0.022). The mean score of VAS in 4 weeks after treatment were 3.3 ± 0.9 and 4.3 ± 1.1 (p=0.001). The mean score of VAS in 6 weeks after treatment were 1.4 ± 1.5 and 2.9 ± 1.4 (p=0.001).

DISCUSSION

For this study, a total of 70 PLID patients were recruited, with 35 patients in the study group (group A) receiving pelvic traction and the remaining 35 patients in the control group (group B) receiving no pelvic traction.

The gender distribution of patients is kept track of. Males were more prevalent than females in group A, with 25 (71.4%) cases and 10 (28.6%) cases, respectively. Males were also more prevalent than females in group B, with 21 (60.0 percent) cases and 14 (40.0 percent) cases, respectively. There was no statistically significant difference between these two groups (p=0.314). It has been found that male is more commonly affected by PLID. This may be due to the heavy works done by them. Similar to the present result Akbar and Mahar (2002) have reported that male is predominant in PLID group.

The age distribution of patients is kept track of. The bulk of the patients in group A were between the ages of 41 and 50 years (45.7 percent), followed by 31 to 40 years (40.0 percent), and less than or equal to 30 years (14.3 percent). The bulk of the patients in group B were between the ages of 41 and 50 years (40.0 percent), with 14 cases, followed by 31 to 40 years (34.3 percent), and less than or equal to 30 years (34.3 percent) (25.7 percent). In groups A and B, the mean SD age of the patients was 39.078.8 and 37.38.1, respectively. There was no statistically significant difference in age between these two groups (p0.050). It has been found from the above result that in both groups age of the patients was more than 30 years. Similar to the present result Akbar and Mahar (2002) have mentioned that PLID occurs in mid age or onwards. Borman *et al*. (2003) have reported that most of the cases PLID occur after the age of 35 years which is remarkably comparable to the outcome of the current study.

The distribution of patients by occupation is kept track of. In group A most of the patients were housewife (25.7%) followed by farmer (22.9%), services (17.1%), businessman (17.1%) and student (14.3%). In group B most of the patients were services (34.3%) followed by housewife (17.1%), businessman (14.3%), student (14.3%) and farmer (11.4%). The differences of occupation among the two groups were not statistically significant (p=0.420). It has been found that housewife are most vulnerable in disc prolapse in group A; however, service holder are more in group B. the disc prolapse is directly related with the occupation. The excess work load causes the PLID. Similar to this present study Kelsey *et al*. (1984) have reported that occupation is directly related with the PLID and also have added that the occupation which is related with weight lifting is more associated with PLID. Similarly, Seidler *et al.* (2003) have published a report regarding the pattern of occupation and the occurrence of PLID which is consistent with the present study. The distribution of patients according to complain were recorded in this study. The mean (±SD) duration of pain was 33.4±12.3 days and 37.0±16.0 days in group A and group B respectively (p=0.297). From this result it is very clear that the both groups of the study population were in equal and non-significant difference of duration of pain. Therefore, at the time of analysis this doesn't create any overestimation of the result.

LBP with leg radiation was present in the majority of cases in both groups, with 57.1 percent cases in group A and 68.6 percent instances in group B (p=0.182). LBP typically radiated to the leg in PLID patients. LBP was intermittent in the majority of cases in both groups, with 80.0 percent cases in group A and 62.9 percent cases in group B (p=0.112). Most of the patients got relieve while resting which was 85.7% cases and 91.4% cases in group A and group B respectively (p=0.452). Pain was severe in 68.6% cases

of group B and 40.0% cases of group A; however, pain was Moderate in 54.3% cases of group A and 28.6% cases of group B (p=0.056). Similar to the present result, Schwarzer *et al*. (1995) were performed a study and have found that low back pain is one the most common clinical features of PLID. Waddell *et al*. (1980) have reported that PLID caused severe low back pain with radiation to the leg.

The aggravating factor of the patients is recorded. Prolonged working (30.4%), leaning forward (30.4%) were the main aggravating factors in group A whereas in group B leaning forward (20.7%), coughing (16.5%), sneezing (15.7%), prolonged working (14.0 %) and prolonged standing (14.0 %) were the main aggravating factors. There are several aggravating factors of PLID of which prolong working is the most common to all. Similar to the present study Mundt *et al.* (1993) have reported that non-occupational Lifting things or children weighing 25 pounds or more with knees straight and back bent has been linked to an increased risk of lumbar disc herniation. Helia–Vaara (1987) has reported that different activities are directly related with PLID.

The mean total count (x103 per mm3) was 7.7 ± 1.0 and 7.6 ± 1.2 in group A and group B respectively (p=0.638). The mean ESR (mm in 1st hr) was 13.4±5.1 and 14.9±4.0 in group A and group B respectively (p=0.266). The HB (gm/dl) was 12.4±1.3 and 11.9 ± 1.4 in group A and group B respectively (p=0.215). The RBS (mmol) was 5.9 ± 1.6 and 5.5 ± 0.7 in group A and group B respectively (p=0.213). The serum creatinine (mg/dl) was 0.8±0.2 and 0.9 ± 0.2 in group A and group B respectively (p=0.289). There was no significant difference between the groups in TC, ESR, HB, RBS and serum creatinine. The outcome of patient assessed by Schober's test was recorded. The mean score of Schober's test before treatment were 3.8 ± 0.7 and 3.6 ± 0.7 (p=0.418). The mean score of Schober's test 2 weeks after treatment were 4.8 ± 0.8 and 4.5 ± 0.6 (p=0.082). The mean score of Schober's test 4 weeks after treatment were 5.2 ± 0.8 and 4.7 ± 0.7 (p=0.012). The mean score of Schober's test 6 weeks after treatment were 5.8 ± 0.9 and 5.3 ± 0.8 (p=0.015). In both groups trend of improvement was positive. Group A had a higher improvement rate than group B. The difference between two groups in improvement was statistically significant after 4 weeks and after 6 weeks. In both groups trend of improvement was positive. The improvement rate was better in group A than group B. The difference between two groups in improvement was statistically significant after 4 weeks and after 6 weeks. Borman *et al*. (2003) have been reported similar result and have mentioned that pelvic traction with some medication have decreased the pain of PLID. In another study Vander-Heijden *et al*. (1995) have reported that the low back pain is relieved after pelvic traction which is consistent with the present study.

The outcome of patient assessed by visual analogue scale (VAS) was recorded. The mean score of VAS before treatment were 8.6±1.1 and 8.9±0.9 (p=0.302). The mean score of VAS in 2 weeks after treatment were 5.8±1.1 and 6.4±1.1 (p=0.022). The mean score of VAS in 4 weeks after treatment were 3.3±0.9 and 4.3±1.1 (p=0.001). The mean score of VAS in 6 weeks after treatment were 1.4±1.5 and 2.9±1.4 (p=0.001). The improvement rate was better in group A than group B. The difference between two groups in improvement was statistically significant after 2 weeks and onward. Akbar and Mahar (2002) have reported that the pain is relieved after treated with pelvic traction of the PLID patients which is similar to the present study result. Beurskens *et al*. (1997) have reported that the efficacy of continuous traction for low back pain is very effective among the PLID patient which is consistent with the present study result.

CONCLUSION

This study was done on very small, selected admitted patients at Dhaka Medical College Hospital's Department of Medicine. Pelvic traction reduces the pain in patients with PLID by reduction of VAS score and increment of Schober's test score. The efficacy of continuous traction for low back pain is very effective among the PLID patient.

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