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*Original Article***Clinical Profile of 306 Patients with Chronic Low Back Pain in a Tertiary Care Hospital**Al-Mahmud FR^{1*}, Mandal MA², Khatun MS³, Rahman MA⁴

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Corresponding Author*Abstract**

Background: Low back pain is not a specific disease though a common health concern worldwide. There is regional variation in its etiology and patterns of presentation. In Bangladesh, there are very limited data on this important aspect of chronic low back pain. **Objective:** We aimed to observe the etiology and pattern of presentation of low back pain among patients seen in our physical medicine and rehabilitation outpatient department (OPD). **Materials and Methods:** This was a cross-sectional study of all patients with low back pain seen at the physical medicine and rehabilitation outpatient department (OPD) of TMSS Medical College Hospital, Bogura from March 2019-August 2019. **Results:** There were total 306 patients seen in the study who presented with low back pain, out of them 41.2% were male and 58.8% were female. The female to male ratio was 1:1.43. Most of patients 94.6% were of 30-60 years of age group. 57.9% patients were housewives and second highest were cultivator (36.6%). Most of our patients 96.5% were hailing from outside the Bogura. The mechanical low back pain was involved in 88.5% of the patients. Lifting of heavy object was the most common 62.7% predisposing factor of low back pain. In clinical pattern, 96.5% patients presented with gradual onset, 66.4% patients had intermittent pain, 11.5% patients had inactivity stiffness and 20.4% patients had radiation of pain. Hypertension and peptic ulcer disease were two top medical co-morbidities while osteoarthritis of hip and knee was the most common associated musculoskeletal disorders. **Conclusion:** Chronic low back pain of mechanical origin (recurrent and chronic in a significant proportion of patients) is predominant in our study. This pattern calls for prevention as well as the early and appropriate care of the patient with low back pain.

Keywords: Chronic low back pain, mechanical, clinical profile.

Introduction

Low back pain is a common health concern worldwide. In developed countries, the estimated prevalence of low back pain in a lifetime ranged from 30% to 79.2%.^{1,2} The disability and morbidity associated with low back pain are a significant burden. In the USA, low back pain is the second most common cause of disability in adults and thesecond most frequent reason for the visit to the physician or medical consultation.³ Low back pain by definition is pain in the region between the lower margin of the 12th rib and the gluteal folds with or without distal radiation to the lower extremity.⁴ Low back pain is neither a specific disease nor a diagnostic entity rather a symptomatic manifestation of actual or potential tissue damage of varying degree of severity. The actual or potential tissue damage that results in low back pain could be mechanical (musculoskeletal strains, nerve

root compression, herniated disc, and degenerative disc and joints) or non-mechanical (inflammatory conditions, infection, or tumor) in origin. According to duration of symptom low back pain is subdivided into two categories: A) acute; usually lasts a few days to few weeks, B) chronic; usually lasts >12 weeks.³ Pain as an unpleasant emotional experience implies that it can be incurred without any definable physical cause. Thus, in some cases of low back pain, nothing abnormal is found despite numerous investigations.⁵ The physical and psychosocial factors that come to play in the etiology of low back pain are generally the same worldwide. However, the extent of involvement of these factors as well as the pattern of low back pain with respect to etiology and population characteristics varies from and within countries.

The aim of this study was to determine the pattern of presentation of low back pain in OPD of Physical Medicine and Rehabilitation department.

Materials and Methods

This was a cross-sectional study of 306 patients with low back pain seen at the physical medicine and rehabilitation outpatient department (OPD) of TMSS Medical College Hospital, Bogura from March 2019 to August 2019. The patients were selected according to the following clinical criteria:

Inclusion criteria

- Patients either sex, age range 20-60 years
- Patients with complaints of low back pain (LBP) for more than 3 months
- LBP for any chronic cause

Exclusion criteria

- Patients age <20 years & >60 years
- Patients having acute LBP
- Patients having LBP for less than 3 months
- Patients having malignancy, infection and spinal instability

Nature of the study was discussed with the patients and their verbal consent was taken. History, clinical examination and x-rays were done. The numerical data were analyzed statistically

Results

Total 306 patients were presented with chronic low back pain. There were 180(58.8%) female and 126(41.2%) Male, and male to female ratio was 1:1.43. This is shown in the Figure-1 below

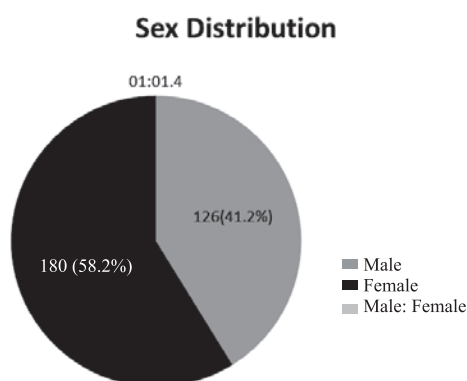


Figure-1: Sex Distribution

The ages ranged from 20 to 60 years. The peak age incidence was 40–49 years with 123(40.3%) patients. This is shown in the Figure-2 below

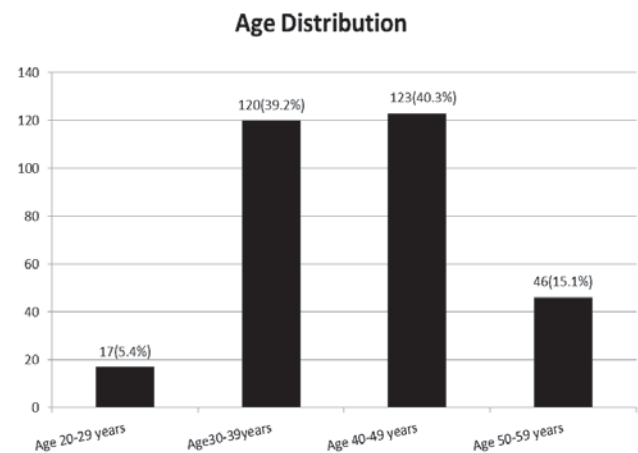


Figure-2: Age Distribution

Housewives accounted for 57.9% of the total patient. Cultivator, sedentary worker & others accounted for 36.6%, 2.9%, and 2.6% of the patients, respectively. This is shown in the Figure-3 below

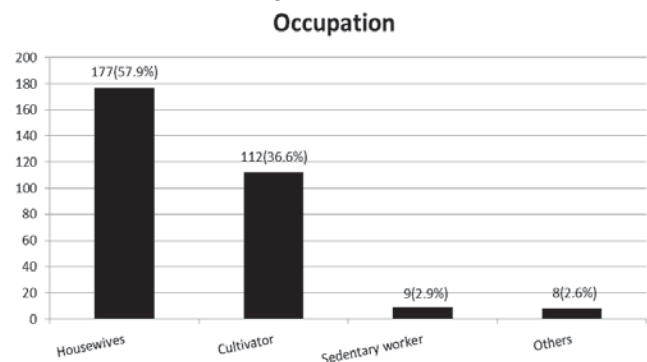


Figure-3: Occupation

85.7%(262) patient had come from outside of Bogura and rest 14.3%(44) were from Bogura. This is shown in the Table-I below

Catchment area	Number	Percentage
From Bogura	44	14.3
Outside of Bogura	262	85.7
Total	306	100

Table-I: Catchment area

The most common predisposing factor leading to low back pain was repetitive bending and lifting heavy objects 62.7 % (192), inflammatory back pain 11.5 % (35), standing without a break 8.7 % (27),

post caesarean section 7.8%(24), trauma 5.4%(17) and Prolong sitting 3.9%(12). This is shown in the Figure-4 below

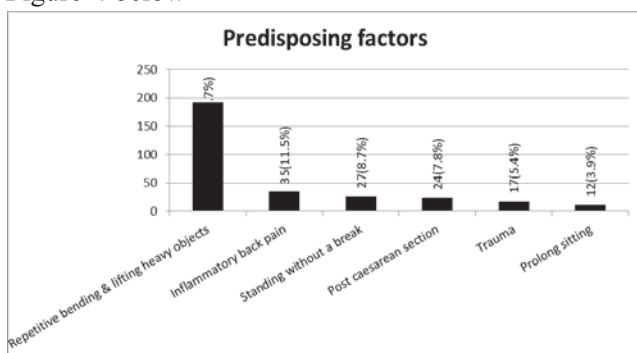


Figure-4: Predisposing Factor

Low back pain was of gradual onset in 96.5% and of acute onset in 3.5% of the patients. Low back pain radiated into the lower extremity in 20.4% of the patients. Pain of most of the patients were relieved by rest and lying flat 88.5%. Maximum of patients had the pain of intermittent character 66.4%. Most of patients 69.2% had complained of gelling at low back region. This is shown in the Table-II below

Clinical characteristics		Number			Percentage
Onset	Gradual	295			96.5
	Acute	11			3.5
Pain pattern	Intermittent	203			66.4
	Relieving factors		Number	Percentage	
		Rest & Lying flat	271	88.5	
	Gelling		212	69.2	
	Radiation		62	20.4	

Table-II: Clinical characteristics

Discussion

The result of this study indicates that there was no significant gender bias with a male to female ratio of 1:1.43. This is shown in the figure-1. This differs from female predominance (male to female ratio of 1:2) documented in other studies. This was because in the rural area housewives were remain very busy throughout the whole day with various household works and most of them were done with a forward bending posture. Galukande et al. reported male to female ratio of 1:2 in a similar setting at Uganda.⁶ Out of 306 patients of the study, most of the patients were

at the age group of 40-49 years 40.3%. In a study, it was found, most of the patients were at age group of 30-39 years.⁷ This is shown in the figure-2. This is somehow close to the result that was found in our series. Most of the patients were housewives 57.9% and the second highest was cultivator 36.6% is shown in the figure-3 in our study, whereas housewives were second highest at another study done in Barishal.⁷ As our study was done in a rural geographical context, so housewives were in the leading sufferers. Most of the patients 85.7% of our study were from outside of Bogura. This is shown in the table-I. The most common predisposing factor to low back pain was repetitive bending and lifting heavy objects 62.7%, inflammatory back pain 11.5%, standing without a break 8.7%, post caesarean section 7.8%, trauma 5.4% & prolong sitting 3.9%. It was found lifting heavy object as the leading predisposing factor in a study done in Nigeria.⁸ this is shown in the figure-4.

In clinical characteristic view, it was evident that low back pain was of gradual onset in 96.5% and of acute onset in 3.5% of the patients. Low back pain radiated into the lower extremity in 20.4% of the patients. Pain of most of the patients was relieved by rest and lying flat 88.5%. Maximum of patients had the pain of intermittent character 66.4%. Most of patients 69.2% had complained of gelling at low back region. This is shown in the table-II. Most of the findings of our study were very close to the findings of another study done by Shakooret al.⁹ From the above mentioned clinical pattern; we had found that most of the patients were suffering from mechanical back pain. The majority of our patients presented with chronic low back pain were also suffering from hypertension as co-morbidity. There was peptic ulcer disease found in a lot of patients, a co-morbidity that can influence the choice of analgesics prescribed for the patient.

Conclusion

Chronic low back pain of mechanical origin is predominant in our environment. Lifting heavy object and previous back injuries were the two top predisposing factors observed. This pattern calls for prevention as well as the early and appropriate care of patients with low back pain.

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