

CLINICAL PROFILE OF THE PATIENTS WITH CHRONIC LOW BACK PAIN -A STUDY OF 102 CASES

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Abstract

A prospective observational study was conducted to find out the clinical profile in the Department of Physical Medicine & Rehabilitation, Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh, from April' 2006 to March' 2007. A total of 102 patients of Chronic LBP were included in the study. Out of them, 42 (41.2 %) were male and 60 (58.8 %) were female and male: female ratio was 1: 1.43. The mean age of the patients were 42.22 ± 8.07 years and most of the patients were at the age group of 40 years to 49 years. Mean height of the patients was 158.86 ± 7.5 cm and mean weight of the patients was 62.92 ± 6.7 kg. Most of the patients were housewives (58.8 %). Maximum patients of the study subjects were in the middle class (81.3 %). Most of the patients use bus for movement and journey (65.7%). Maximum patients gave the history of gradual onset of the pain (97.1 %). Maximum patients had the pain of intermittent in character (63.7 %). From the present study, it may be concluded that females are affected earlier than male and there may be some relation with nature of journey with chronic LBP.

Introduction

Low back pain (LBP) is very common, experienced at some time in life by up to 80% of the population¹. LBP is an uncomfortable sensation in the lumbar and buttock region originating from neurons near or around the spinal canal that are injured or irritated by one or more pathologic processes². Definition of LBP is difficult, but it refers to a symptom complex in which pain is localised to the lumbar spine or referred to the leg or foot³. LBP affects the area between the lower rib cage and gluteal folds and

often radiates into the thighs⁴. Despite its high prevalence, LBP remains poorly understood and inadequately treated. This is due to the heterogeneity of the patients' population, and the lack of a simple and easy to apply, clinically useful system for characterisation of patients⁵. Lumbar backache is one of the most common causes of chronic disability and in the majority of cases of the backache is associated with some abnormality of the intervertebral discs at the lowest two levels of the spine⁶. Back pain is one of the most prevalent medical disorders in industrialised societies⁷. LBP has been estimated to afflict between 60% and 90% of individuals some times in their life, and is the leading cause of disability in people under the age of 45 years⁸. LBP is the most common medical cause of inability to work in the western countries⁹. Non-specific low back pain of mechanical origin is second only to the common cold as a cause of self-limiting symptoms and disability in the community¹⁰. Back symptom is the most common disability in patients under the age of 45 years¹¹. It was estimated in 1997 that the financial cost of low back pain accounting for medical bills compensation and forfeited productivity, was somewhere between \$38 billion and \$ 50 billion in the United States². Abnormalities in the lumbar spine are common, and degenerative changes virtually be found in all older people¹².

The treatment and management of LBP is not simple. There are many divergent ways of management of LBP. For 2 decades, lumber spine exercises advocated by Mc Kenzie for low back pain have been used for the management to patients with spinal disorders^{13,14}. Chronic LBP is resistant to treatment, and patients are often referred for multidisciplinary treatment. Current multidisciplinary biopsychosocial rehabilitation regards disabling chronic pain as the result of multiple interrelating physical, psychological, and social or occupational factors¹⁵. Bangladesh is a poor country with huge population and with very limited resources and poor management. So, for various reasons we cannot manage a huge number of disabled patients with low back pain with our present resources and management system. The incidence of LBP varies from country to country but is uniformly high in industrialised nations¹⁶.

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Disability related to back pain has increased exponentially over the past 20 years due, at least in part, to psychological and social factors that influence adaptation to back pain early in the process¹⁷. LBP is the major cause of industrial disability. It is estimated that 80% of all people will experience at least one episode of back pain in their lifetime, with point prevalence ranging from 15% to 39%, 70% of patients with an episode of LBP recover within one month, and 90% within 3 months. Only 4% patients will have symptoms larger than 6 months. In a study in the USA it is found that LBP is the most common single musculoskeletal complaint and a major cause for being out of work, resulting in billions of dollars in lost wages and compensations payment annually¹⁸.

LBP affects 60%-80% of US adults at some times during their lives, up to 50% have pain within a given year. In 5%-10% of patients with low back pain become chronic¹⁹. Among chronic conditions, back problems are the most frequent cause of limitation of activity in persons younger than 45 years²⁰. In our country, many working time of the people is also lost for LBP. And many of them become disabling for the condition. The present study was done to find out the clinical pattern to improve the present situation regarding treatment, so that they may be able to contribute themselves for the prosperity of the country.

Methodology: selection of the patients

The study was conducted in the Department of Physical Medicine & Rehabilitation (PMR), Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka, from April' 2006 to March' 2007. Patients having LBP were selected from the department of PMR who were referred from various out patient departments of BSMMU and also from general practitioners out side the hospital. On arrival at the department, detailed history was taken and clinical examination and necessary investigations were carried out properly. The patients were selected according to the following clinical criteria.

Inclusion criteria

- Patients of either sex, age = 30 years and = 70 years.
- Patients with complaints of LBP for more than three months.
- LBP due to any chronic cause.
- Having no evidence of malignancy.
- Having no evidence of infection on the skin over the low back.

Exclusion criteria

- The patients below the age of 30 years and above 70 years.
- Patients having LBP for less than three months.
- The patients with traumatic LBP.
- The patients having acute LBP
- The patients having any complications like cauda equina syndrome, caries spine, malignancy, etc.

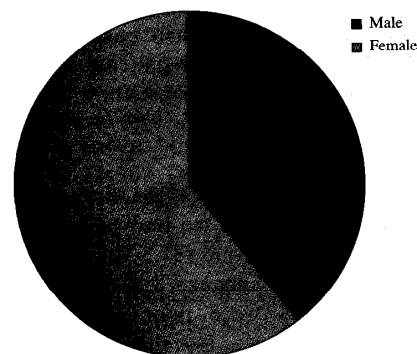
Data collection procedure

A total of 102 patients were selected for the study according to the selection criteria. The data collected from all the cases were recorded under the specified data sheet. Before admission into the trial the nature of the study was discussed with the patients and verbal consent of the patients was taken. History, clinical examination and relevant investigations were done. The findings were recorded properly.

Results

A total of 102 patients of chronic LBP were included in the study. Out of them, 42 (41.2 %) were male and 60 (58.8 %) were female and male: female ratio was 1: 1.43 (Fig-I).

Fig 1 : Distribution of sex in the study subjects (N=120)



Age of the patients

The mean age of the patients in study were 42.22 ± 8.07 years. Out of 102 patients in the study, most of the patients were at the age group of 40 to 49 years. Forty one (40.3%) patients were in this group. 39.2 % patients were at the age group of 30-39 years. On the other hand, it was found that maximum female persons were affected more with LBP in earlier (between 35 to 40 years age) than males (between 40 to 45 years age, Fig - 2).

Fig 2 : Distribution of sex in relation to age of the study subjects (N= 102).

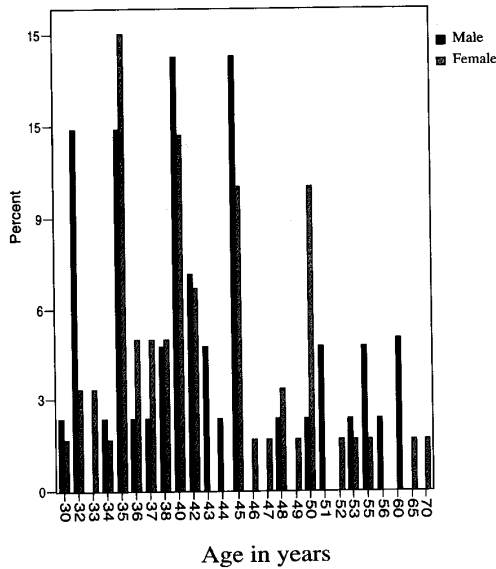
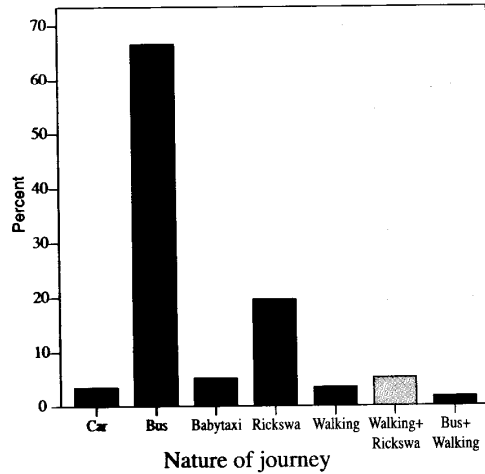


Fig 3 : Distribution of nature of journey of the study subjects (N= 102).



Occupation of the patients

Regarding occupation of the patients, most of the patients were housewives (HW, 58.8 %), then the second highest were the Govt. service holder (19.6 %), and then businessman (10.8 %). There were some patients of different occupation in our findings; they were labour (6.9 %), private service (2.9 %) and retired serviceman.

Socioeconomic condition of the study subjects

Maximum patients of the study subjects were in the middle class group (81.3 %); their monthly income was in between 2001 to 6000 taka. Some patients were poor (16.7 %), their monthly income was less than 2000 taka and a very few patients were rich (2 %), their monthly income was more than 6000 taka found in our study. Most of our study subjects (99 %) came from the Dhaka metropolitan city and only (1 %) came from the villages nearby the Dhaka district.

Nature of journey of the study subjects

In our study, most of the patients use bus for movement and journey (65.7%). And then 19.6 % used to journey by rickshaw. A few subject used to journey with car, baby taxi, walking etc (Fig.-3).

Overall clinical characteristics of the patients

At the first attendance of the patients, base line clinical characteristics of the patients were recorded. Mean height of the patients was 158.86 ± 7.5 cm and mean weight of the patients was 62.92 ± 6.7 kg. Mean duration of symptoms of the patients was 37.67 ± 37.80 months, mean pulse was 80.80 ± 5.14 /minute, mean systolic blood pressure was 120.34 ± 14.69 mmHg and mean diastolic blood pressure was 76.34 ± 8.12 mm Hg (Table No- I). All patients are married **except one** who was unmarried, maximum patients gave the history of gradual onset of the pain (97.1 %) and a few gave the history of pain after trauma (2.9 %), pain of most of the patients relieved by rest (46.15%) and lying flat (52%) and aggravated by activity. All of the patients had no morning stiffness in the LB region. Maximum patients had the pain of intermittent in character (63.7 %) but 36.30% patients had the pain of constant in character. Regarding radiation, 50% patients presented with radiation of pain in the lower limb.

Table I : Overall baseline clinical characteristics of the patients (n =102).

Variables	Age in years	Height (cm)	Weight (Kg)	Duration (months)	Pulse (m)	SBP (mm Hg)	DBP (mm Hg)
Mean	42.22	158.86	62.92	37.67	80.80	120.34	76.34
SD	8.07	7.5	6.7	37.80	5.14	14.69	8.12

n = number of the patients, SBP= systolic blood pressure, DBP= diastolic blood pressure, SD= standard deviation

Discussion

In the present study a total of 102 patients of Chronic LBP were duly participated in the study. Out of them, 42 (41.2 %) were male and 60 (58.8 %) were female and male: female ratio was 1: 1.43. In a study on OA knee joint at Chittagong, Bangladesh, it was found that 61 % of the patients were male and 39% were female²¹. Although men and women are equally prone to development of OA 20, but more joints are affected in women than men²². The female preponderances in this study may be due to more female attendance in the hospital than male because of excessive business in the office hour in the capital city like Dhaka, Bangladesh. In our study, mean age of the patients were 42.22 ± 8.07 years. Out of 102 patients in the study, most of the patients were at the age group of 40 to 49 years. Forty one (40.3 %) patients were in this group. And then 39.2 % patients were at the age group of 30-39 years. In a study, it was found that maximum patients were in the age group of 30-39 years²³. This is to some extent same as the result found in the present series. Most of the patients were house wives (HW, 58.8 %) found in our study and then the second highest was the Govt. service holder (19.6 %), and then businessman (10.8 %). There were some patients of different occupation in our findings; they were labour (6.9 %), private service (2.9 %) and retired serviceman. In a study at Barisal, it was found that most of the patients of LBP were students (23.97 %), then HW (16.96 %), labors (10.82 %), businessman (9.95 %) and some other occupations were also found in some cases²³. This is to much extent same in some occupations but they found student in the highest position because they included all patients of different ages and we included patients of age = 30 years and below =70 years. So, in our study HW was found more in respect to occupation. In the present study, maximum patients of the study subjects were in the middle class group ((81.3 %); their monthly income was in between 2001 to 6000 taka. Some patients were poor (16.7 %), their monthly income was less than 2000 taka and a very few patients were rich (1 %) their monthly income was more than 6000 taka found in our study. In some studies, it was found that middle class people were attended more in their study^{21, 24}. This is as same as found in the present study. This may be due to the poverty situation of the country. Some rich people usually take treatment from the private clinic and private doctors. So, they are less in the study. On the other hand, poor people are illiterate and have no enough

money to expense to reach the tertiary level hospital like BSMMU Hospital. So, they are also less in number.

Conclusion

From the present study, it may be concluded that female persons suffer from LBP earlier than male. There may be some influence of nature of journey on chronic LBP, especially bus journey that may develop or precipitate it.

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