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Research Article

Pattern of Mechanical Low Back Pain

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Abstract

Millions of patients have mechanical low back pain; billions of dollars are spent treating mechanical low back pain throughout the world. It has been assumed that fatigue of spinal stabilizing muscle may be a part of the etiology and other factors such as prolong sitting combined with whole-body vibration may also contribute to the development of mechanical low back pain. To assess pattern of mechanical low back pain was aim of the study. This was a cross sectional descriptive study conducted among conveniently selected 110 samples. About 60.90% have been facing lower back pain. Result found 15.45%, 35.45%, 26.36% and 19.09% faced Mild MLBP, Moderate MLBP, Severe MLBP and Worsen MLBP respectively. About 28.18%%, 39.09%, 9.09%, 5.45% and 18.18% respondents used Rickshaw, Bus, Private car, Motor bike and Train as a vehicle. Half of the respondents crossed medium distance. Study also revealed that 6.36%, 21.81% and 71.81% faced back pain before journey, during journey and after journey respectively. Bus and rickshaw journey with medium and long distance was associated with low back pain.

Keywords: pattern; mechanical low back pain; MLBP; LBD

Introduction

Mechanical low back pain is one of the most common patient complaints now a day. Approximately two thirds of adults are affected by mechanical low back pain at some point in their lives, making it the second most common complaint in ambulatory medicine and the third most expensive disorder in terms of health care dollars spent surpassed only by cancer and heart disease [1]. Low back pain reportedly occurs at least once in 85% of adults younger than 50 years. Low back pain affects men and women equally. The onset most frequently occurs in people aged 30-50 years. Low back pain is the most common and most expensive cause of work-related disability as well [2]. Furthermore, the incidence of current smoking and the association with low back pain is higher in adolescents than in adults [3]. Back pain is just that-pain in the back. It can be localized to the lumbar spine or may radiate into the legs below the knee (sciatica). As a rule, most episodes of back pain are caused by mechanical disorders associated with overuse of the back and spine, or the gradual changes associated with aging. In about 10 percent of the cases, back pain is caused by a systemic illness [4]. Nonspecific low back pain is the most common type of back pain. About 19 in 20 cases of sudden-onset (acute) low back pain are classed as nonspecific. This is the type of back pain that most people will have at some point in their life. It is called nonspecific because it is usually not clear what is actually causing the pain. In other words, there is no specific problem or disease that can be identified as the cause of the pain. The severity of the pain can vary from mild to severe. Nonspecific low back pain means that the pain is not due to any specific or underlying disease that can be found. It is thought that in some cases the cause may be a sprain (an over-stretch) of a ligament or muscle. In other cases the cause may be a minor problem with a disc between two vertebrae, or a minor problem with a small facet joint between two vertebrae. There may be other minor problems in the structures and tissues of the lower back that result in pain. However, these causes of the pain are impossible to prove by tests. Therefore, it is usually impossible for a doctor to say exactly where the pain is coming from, or exactly what is causing the pain [5]. However, it is estimated that the incidence of life-time LBD is in the order of 60 to 70% and because of its widespread prevalence, the socioeconomic impact of this disorder is significant [6,7]. This has created a body of literature on the nature, impact and potential causes of LBD. Some of this research has focused on occupation as a risk factor where epidemiological data indicates a variation in the rate of low back disorders based on type of occupation. Over time, a number of theories have been put forward.

Methods

This was a descriptive type of cross sectional study. The study was carried out in Islami Bank Central Hospital, Kakrail (IBCHK), Dhaka, Bangladesh and IbnSina D. Lab & Consultation Centre, Doyagonj, Sutrapur, Dhaka. The study populations were mechanical low back pain patients came from different places to taking treatment in Islami Bank Central Hospital, Kakrail (IBCHK) and Ibn Sina D. Lab & Consultation Centre, Doyagonj, Sutrapur, Dhaka. Data were collected from 110 patients. Convenient sampling

technique was followed. Data were collected through face to face interview methods. The study was conducted over the period of six months. The data were checked and verified by the investigator at the end of the work every day. Any inaccuracy and inconsistency was corrected in the next working day. However cross checking of the collected data was done randomly. The data entry process started immediately after the completion of data collection. The collected data was checked, verified and then entered into the computer. Only fully completed datasheet was entered into the computer for the final analysis. The analysis was carried out with the help of SPSS (Statistical Package for Social Science) Windows software program.

Results

Among the 110 respondents about 59.09% (65) were male and 40.90 % (45) were female. In case of age distribution about 20.90% (23) were in age group 20 to 30, 31.81% (35) were in age group 31 to 40 years and about 47.27% (52) were in age group 41 to 50 years. In case of occupation, 63.63% spend sedentary job where 36.36% did non-sedentary jobs. About 6.36%, 32.72% and 60.90% have been facing upper back, middle back and lower back pain respectively (Table 1).

Characteristics	Frequency	Percentage
Gender		
Male	65	59.09
Female	45	40.90
Age (years)		
20-30	23	20.90
31-40	35	31.81
41-50	52	47.27
Occupation		
Sedentary	70	63.63
Non-sedentary	40	36.36
Nature of MLBP		
Upper back	7	6.36
Middle back	36	32.72
Lower back	67	60.90

Table 1: Socio-demographic characteristics of the respondents.

Study revealed that about 15.45%, 35.45%, 26.36% and 19.09% faced Mild MLBP, Moderate MLBP, Severe MLBP and Worsen MLBP respectively (Figure 1).

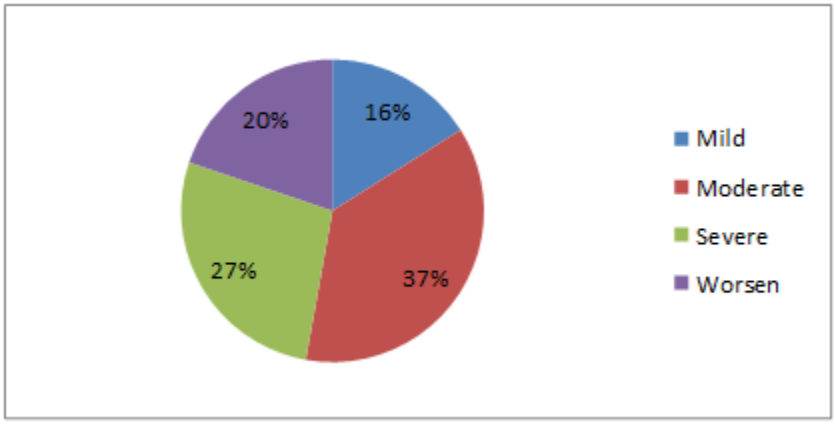

Figure 1: Nature of the pain of the respondents.

Study revealed that about 28.18%%, 39.09%, 9.09%, 5.45% and 18.18% respondents used Rickshaw, Bus, Private car, Motor bike and Train as a vehicle respectively. About 22.72% respondents crossed long distance, 49.09% medium distance and 28.18% short distance. Among the respondents study also revealed that 6.36%, 21.81% and 71.81% faced back pain before journey, during journey and after journey respectively (Table 2).

Characteristics	Low back pain	
	Frequency	Percentage
Type of vehicle		
Rickshaw	31	28.18
Bus	43	39.09
Private car	10	9.09
Motor bike	6	5.45

Train	20	18.18
Cross distance		
Long distance	25	22.72
Medium distance	54	49.09
Short distance	31	28.18
Incidence of MLBP		
Before journey	7	6.36
During journey	24	21.81
After journey	79	71.81

Table 2: Pattern of journey and low back pain.

Discussion

Study revealed that most of the back pain patient was in age group 41 to 50 years. Two third respondents led sedentary life style. About one third respondents faced moderate type of information. Most of the back pain patients used bus and second most was rickshaw. Almost half of the respondents crossed medium distance and most of the patients faced pain after journey. A number of theories of causing of low back disorder have been proposed over the last few decades. Some have been tested in animal models and under laboratory conditions. Epidemiological research looking at these associations in populations has had the advantage of looking at the issue under more real working and living conditions, as opposed to these artificially created conditions such as laboratory conditions. This review supports that point of view. This area of research was complicated not only by the existence of a multitude of potential causes and their inter-relationships; but also by the extremely high frequency of LBD in humans. Since this condition appears to be ubiquitous in human beings, it is extremely difficult to isolate putative exposures from other potential causes and confounders. In relation to occupation, there is a strong tendency for workers to self select employment on the basis of psychosocial and physical factors that, in themselves, predict on the incidence of low back disorder. Any attempt to assess causes in the workplace, must adequately control for these factors, which include, pre-employment low back conditions, leisure activities including sports that are differentially played by various occupations, smoking, family history, level of education, depression and a host of other factors not related to employment (8,9).

Conclusion

Mechanical vibration and crossing long distance were responsible different kinds of mechanical low back pain.

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