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Research Article

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Prevalence of Osteoarthritis among Rickshaw Puller in Selected Areas of Dhaka City

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Abstract

Osteoarthritis (Har Khoy) is a common incident in recent period in our country. Literature suggests that studies on OA in people who have joint symptoms may be more clinically relevant, because not all persons who have radiographic OA have clinical disease, and not all persons who have joint symptoms demonstrate radiographic OA. Rickshaw puller are poor people and almost all of them depend on pharmacy man/quack for medical remedy. This study was conducted to find out number of rickshaw puller are suffering from osteoarthritis. Study design was cross sectional in nature and total sample was 79. History taking, physical examination and radiological findings were considered to diagnose OA. About half of the respondents belonged to 31-49 years age group followed by 30% from 50-70 years and 19.60% from ≤ 30 years. About 67% were illiterate and 28% did primary education. Most of the rickshaw puller (62.40%) earned monthly 8000-10000 BDT followed by 5001-7999 BDT earned by 33.40%. Among 79 cases osteoarthritis was found among 9% rickshaw puller. So prevalence of OA among rickshaw puller was remarkable.

Key words: *Osteoarthritis; Rickshaw puller*

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Introduction

Osteoarthritis (OA) is not a rare disease rather than common in nature in whole part of the world. It is a debilitating disease which has societal as well as economic burden. [1] Rickshaw is the most important transport of Bangladesh. Usually rickshaw puller comes from rural area and lower class and reside in slum area of urban. Actually most of the rickshaw puller live on hand to mouth. Literature suggests that prevalence of knee osteoarthritis (KOA) is increasing gradually in China i.e.7.50%, 10.9% and 13.6%. [2] Similar picture is found in India and Bangladesh and it is reported to be 5.78% and 10.20% as well. [3-4] But in Pakistan it is far away than neighboring countries. A study in Pakistan has shown that 28.00% of the urban and 25.00% of the rural population have knee osteo arthritis (KOA). [5] Heavy physical workload is the most common occupational risk factor for OA in several anatomical locations. Kneeling and regular stair climbing, crawling, bending and whole body vibration, and repetitive movements are thought to be irritating factor for OA. Normally patients

complain pain followed by restriction of joint movement and they draw attention to seek medical care. As OA occurs frequent disability and day by day prevalence of OA is going upward trend so it is necessary to study. So this study will explore the scenario among rickshaw puller.

Methodology

It was a descriptive cross sectional study conducted among suspected cases of osteoarthritis among rickshaw puller. First of all rickshaw puller were asked about any pain, discomfort, limitation of movement in the knee, hip, ankle, spine and after that made him understand about details procedure of the study. After taking verbal consent physical examination by physiotherapists was done and for more confirmation radiological examination was also ensured. Total 79 cases were taken as sample because radiological test was costly. Previous medical records were evaluated thoroughly. Along with sociodemographic history was taken. This study conducted among rickshaw puller who drives rickshaw in Dhaka city. Non probability convenient sampling was used to collect data. Data were collected in a pre-designed data collection sheet. Collected data were analyzed using computer based programme Statistical Package for Social Sciences (SPSS) for windows version 20. No data or any information was collected without permission of the patient. Participation in this research was fully voluntary. The respondents were remained entirely free to withdraw their participation at any stage or at any time of the study. Written informed consent was taken from each patient. Confidentiality was assured and anonymity was maintained; no participants were identified in any report or publication under this study.

Results

About half of the respondents were from 31-49 years age group followed by 30% from 50-70 years and 19.60% from ≤ 30 years. (Figure 1) About 67% were illiterate and 28% did primary education. (Figure 2) Most of the rickshaw puller (62.40%) earned monthly 8000-10000 BDT followed by 5001-7999 BDT earned by 33.40%. (Figure 3) Among 79 cases osteoarthritis was found among 9% rickshaw puller. (Figure 4)

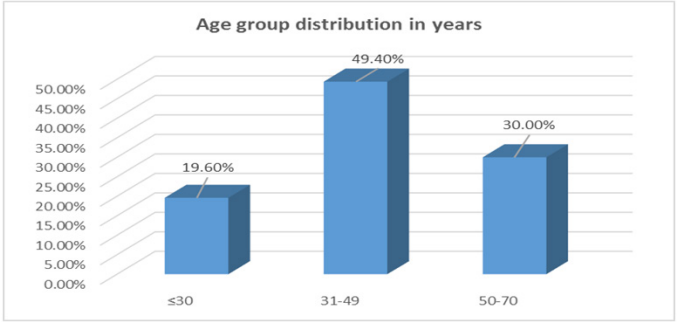

Figure 1: *Age group distribution of the respondents.*

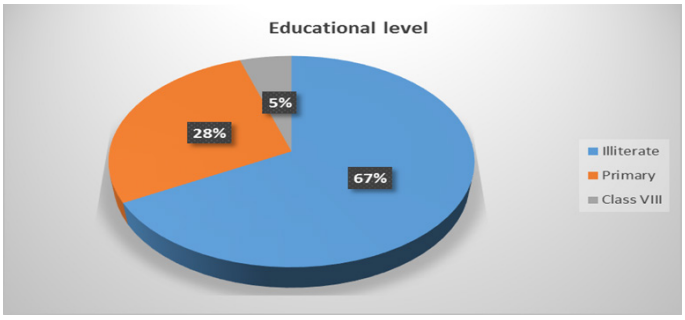

Figure 2: *Educational status of the respondents.*

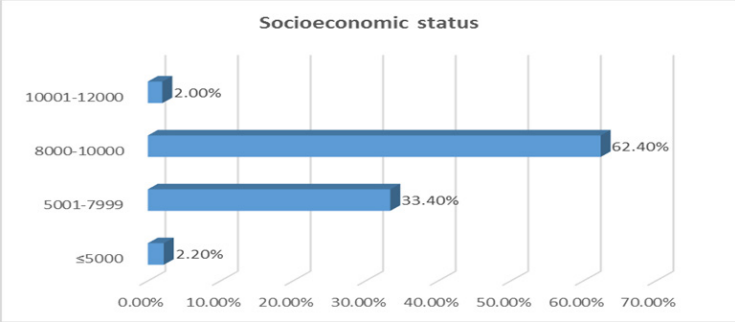

Figure 3: *Socioeconomic status of the study subjects.*

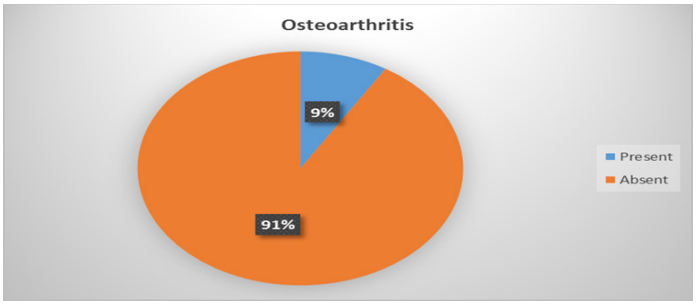

Figure 4: *Distribution of osteoarthritis.*

Discussion

Rickshaw pullers are susceptible to systematic health risks. Deteriorating health combined with health shocks can impose a significant burden on the urban poor, dragging down the pace of upward mobility during their lifetime. [6] This study found 9% of rickshaw puller were suffering from osteoarthritis which was quite similar with Haq SA study (2005). But our sample size was small i.e 79. May be large sample size will give different picture. Repetitive use of joints at work is associated with an increased risk of OA. Studies have found that farmers have a high prevalence of hip OA. [7] The prevalence of Heberden's nodes was much higher in the cotton mill workers, whereas spinal OA was no more common in these workers than in controls. [8] Workers whose jobs required repeated pincer grip had more OA at distal interphalangeal joints than did workers whose job required power grip. [9] The risk of development of knee OA was more than two times greater for men whose jobs required both carrying and kneeling or squatting in mid-life had more than for those whose jobs did not require these physical activities. [10] And the risks of knee OA associated with kneeling and squatting were much higher among subjects who were overweight or whose job also involved with lifting. [11] The relationship between muscle strength and OA is complex, may vary by joint site, and is not entirely understood. Surprisingly, the general level of physical activity itself may also increase the risk of OA. For instance, physical activity among elderly subjects in the Framingham Study was generally characterized by leisure time walking and gardening. However, person who engaged in relatively high levels of such activity had a threefold greater risk of developing radiographic knee OA than sedentary persons over 8 years of follow-up. [12]

Conclusion

Overall prevalence of osteoarthritis among rickshaw puller was 9%. Proper treatment guideline and awareness on exact treatment and nature of disease should be disseminated among rickshaw puller so that they can escape from maltreatment.

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