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Research Article

Osteoarthritis in Hilly Area of Bangladesh

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Abstract

Genetic differences in joint structure may account for some differences found among ethnic groups. Osteoarthritis is also among the most common causes of pain and disability in older people. The aim of the study was to assess osteoarthritis among people reside in hilly area. A cross-sectional descriptive study was done among purposively selected 384 people from hilly area. History of patient, X-ray and physical examination was used to determine osteoarthritis. Mean±SD age of respondents was 53.71±1.20 years. Most of them were house wife. About 89.6% respondents had no osteoarthritis and 10.4% respondents were diagnosed as osteoarthritis. Most of the respondents (87%) suffered from knee osteoarthritis and 13% from hip osteoarthritis. No significant association was found between age group and osteoarthritis. To lead healthy and productive life every hilly people should conscious about osteoarthritis.

Keywords: osteoarthritis; hill

Introduction

Osteoarthritis (OA) is the most prevalent of the chronic rheumatic diseases and is a leading cause of pain and disability in most countries worldwide [1]. The prevalence of OA increases with age and generally affects women more frequently than men. Most of the OA disability burden is attributable to the hips and knees [2]. Osteoarthritis of the knee and non-specific low back pain (NSLBP) are among the most common rheumatic disorders in the Asia-Pacific region. Studies have shown the prevalence of knee osteoarthritis (KOA) to be 7.50%, 10.9% and 13.6% in China [3]. In India and Bangladesh, it is reported to be 5.78% and 10.20% respectively [4,5]. A study in Pakistan has shown that 28.00% of the urban and 25.00% of the rural population have knee osteoarthritis (KOA) [6]. Although ample studies have been conducted on knee osteoarthritis worldwide, but scanty data is available in ethnic communities in Bangladesh. The extensive literature search did not show any local study exploring frequency of factors associated with osteoarthritis. The results of this study would definitely make a foreground for future studies to be conducted on developing preventive strategies and ultimately reducing the morbidities and mortalities associated with osteoarthritis.

Methods

An observational epidemiological study with cross-sectional design was conducted to assess osteoarthritis among hilly people in selected area of Bangladesh. Patients were selected from different clinics/ hospitals/ physiotherapy center attending for consultation with clinicians. All patients with pain in spine, hip, neck, knee and ankle joint who were registered and taken physiotherapy treatment in OPD of selected centers/ hospitals during the period of data collection. All suspected cases of OA were included and very sick, mentally retarded, pregnant and not willing to participate in the study were excluded. Sample size was 384. Non probability convenient sampling was used to collect data. All the patients who attendant the health care center. Data were collected by pre tested semi structured questionnaires and in face to face interview. Information about clinical history, physical examination, radiological examination, life style along with socio demographic characteristics was also be obtained.

Result

Variables	Number	Percentage
Age (in years)		
20-29	13	3.4
30-39	32	8.3
40-49	57	14.8
50-59	167	43.5
60-69	81	21.1
>70	34	8.9
Mean±SD	53.71±1.20	
Occupation		
Housewife	131	34.1
Service	104	27.1
Business	66	17.2
Day labor	32	8.3
Farmer	32	8.3
Others	19	4.9

Table 1: Socio-demographic characteristics of respondents.

Table 1 shows that mean age of respondents was 53.71±1.20 years. About 43.5%, 21.1% and 14.8% of study subject's age was 50-59 yrs, 60-69 yrs and 40-49 yrs respectively. Most of them were house wife 34.1% followed by service 27.1%.

Osteoarthritis	n	%
Present	40	10.4
Absent	344	89.6
Total	384	100.0

Table 2: Prevalence of osteoarthritis.

Table 2 shows 89.6% respondents had no osteoarthritis and 10.4% respondents were diagnosed as osteoarthritis.

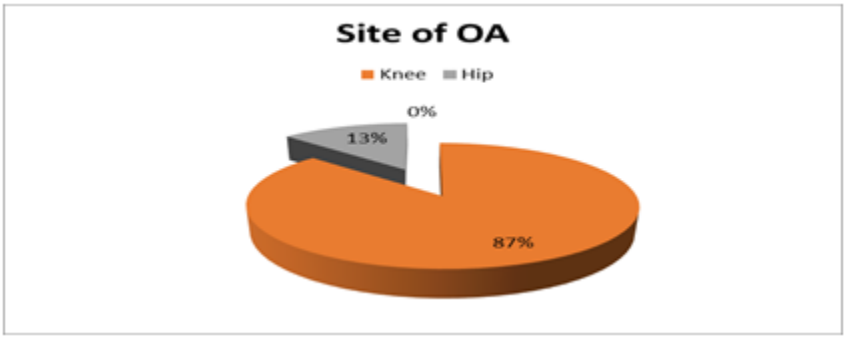

Figure 1: Site of osteoarthritis.

Figure 1: shows that most of the respondents (87%) suffered from knee osteoarthritis and 13% from hip osteoarthritis.

Age category	Osteoarthritis		Chi-square	p value
	Present	Absent		
20-29	1(0.3)	12(3.1)	6.85	0.23
30-39	6(1.6)	26(6.8)		
40-49	6(1.6)	51(13.3)		
50-59	11(2.9)	156(40.6)		
60-69	12(3.1)	69(18.0)		
>70	4(1.0)	30(7.8)		
Female	12(3.8)	138(35.9)		
Occupation				
Housewife	9(2.3)	122(31.8)	6.35	0.27
Business	14(3.6)	90(23.4)		
Service	10(2.6)	56(14.6)		
Day labor	1(0.3)	31(8.1)		
Farmer	4(1.0)	28(7.3)		

Others	2(0.5)	17(4.4)		

Table 3: Association between socio-demographic condition and osteoarthritis.

Table 3 shows that no significant association was found between age group, occupation and osteoarthritis.

Discussion

We know that great majority of hilly people are known to be registered with primary care practices [7]. Joint pain lasting for more than one month in the past month was slightly more prevalent among ethnic minorities. The present study found that 89.6% respondents had no osteoarthritis and 10.4% respondents were diagnosed as osteoarthritis. Few studies of the prevalence of musculoskeletal symptoms among ethnic minority populations in the UK have been published. Comparison is possible with results from other countries, although methodology and case definitions differ and the focus of some studies has been radiological abnormality rather than symptoms. Bremner et al noted a similar prevalence of radiological osteoarthritis between a white British population and one from rural Jamaica, although they reported that symptoms and incapacity were lower among Jamaicans [8]. Gibson et al found similar levels of joint disease in Pakistan and in white European populations [9]. In the USA, levels of self-reported arthritis have been found to vary little by ethnicity [10] and musculoskeletal disability was similar in African- American and white populations [11]. A telephone study of acute back pain in North Carolina, USA, found a slightly lower prevalence in non-white subjects [12]. My results are compatible with these studies in that we have shown only small differences in overall pain prevalence between ethnic minority and white populations. As far as we know, our finding of markedly increased prevalence of “pain in most joints” has not previously been reported. The difficulties associated with any study of this type mean that some caution must be expressed. However, despite its limitations, this study presents important evidence of clinically significant differences among ethnic groups. Further research examining other ethnic minority populations in other locations would be valuable. It would also be of great interest to look more closely at the relation between symptoms and objective measures of morbidity, and at the phenomenon of widespread musculoskeletal pain among people from ethnic minority communities. There are several possible explanations for the differences in pain reporting by different ethnic groups. These include pain thresholds and the experience of pain, the effect of change of culture and migration, and mental health issues. Widespread pain might, for example, be an indication of mental distress and, possibly, migration, rather than ethnicity, is a key factor. A review of published reports of these issues has recently been carried out with an emphasis on South Asian subjects [13]. The authors of the review call for further work to investigate the extent and nature of musculoskeletal disease among ethnic minorities.

Conclusion

Osteoarthritis is one of the most common rheumatologic problems. The prevalence of osteoarthritis among ethnic communities is increasing trend.

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