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Original Article

Clinical Profile of Patients with Osteoarthritis of the Knee in a Tertiary Care Hospital in Bogura

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Abstract

Background: Osteoarthritis of the knee is one of the most common degenerative joint diseases and is responsible for a huge burden of pain and physical disability. **Objectives:** This study was done to identify clinical profile of patients with osteoarthritis of the knee. **Materials and Methods:** It is a cross-sectional study done in physical medicine and rehabilitation outpatient department (OPD) of TMSS Medical College Hospital for a period of six months from 1st March 2019 to 31st August 2019. **Results:** In this study, total number of patients were 560 (five hundred sixty), out of them 326(58.2%) were male and 234(41.8%) were female. Most of the patients of were in the age group of 50 years to 59 years. Maximum number of females in the age group of 40 years to 50 years was affected. Most of the males were affected in the later ages, between 55 years to 65 years. Most of the patients were middle class 69.1% and housewives 36.1%. Most patients gave the history of gradual onset of the pain 88.1%. Most of the patients had no morning stiffness in the knee 89.5%. Maximum patients had intermittent pain 61.4% but 38.6% patients noticed constant pain. Most of the patients 51.8% also noticed no swelling. **Conclusion:** By this study, it can be concluded that OA knee is more common in males and mostly manifests around the 5th decade.

Keywords: Osteoarthritis, Knee, Clinical profile

Introduction

Osteoarthritis is the most important of the rheumatic diseases and is responsible for a huge burden of pain and physical disability.[1] Osteoarthritis is characterized by both degeneration of articular cartilage and simultaneous proliferation of new bone, cartilage, and connective tissue.[2] It is the most prevalent form of arthritis and it is the principal cause of disability in the elderly.[3-6] The area of local damage occurs in those parts of the joint subjected to maximal mechanical load.[7] This in addition to the epidemiologic associations with trauma and abnormal joint biomechanics makes it clear that OA is a mechanically driven disorder. The process of abnormal tissue turnover with loss of cartilage volume and on increase in bone and capsular tissue, are chemically mediated.[7] Mild OA of the knee is extremely common, mainly affecting middle aged and elderly women.[8] The knee is a complex joint, with three major compartments: the medial and lateral tibio-femoral joints and the patello-femoral joint. Each of these areas can be affected by OA separately, or in any combination. Maximum evidence of cartilage damage is usually found on the lateral facet of the patella in the patello-femoral OA, and on the tibial plateau area least well protected by the meniscus in tibio-femoral disease.[9] Obesity is very strongly associated with knee OA, particularly in the older female group.[9] Pain on walking, stiffness of the joint and difficulty with steps and stairs are the major symptoms. The physical signs depend on the distribution and severity of the OA within the joint. Wasting of the quadriceps muscle, bony swelling, and tenderness on and around the joint line, painful limitation of full flexion and course crepitus are the usual signs. Medial compartment disease often results in a varus deformity, a very common finding in knee OA.[10]

A wide variety of treatments are available for those who suffer from OA of the knee. To improve quality of

life, we should know the problems and condition of the patients of OA knee joints. For this purpose we studied clinical profile of OA knee.

Materials and Methods

It is a cross-sectional study done in physical medicine and rehabilitation outpatient department (OPD) of TMSS Medical College Hospital for a period of six months from 1st March 2019 to 31st August 2019. The patients were selected according to the clinical criteria developed by the American College of Rheumatology (ACR) [10] which is as follows:

1. Knee pain for most days of prior month.
2. Crepitus on active joint motion.
3. Morning stiffness of the knee < 30 minutes.
4. Age > 30 years.
5. Bony enlargement of the knee on examination.
6. Bony enlargement.

OA knee was considered to be present when: 1, 2, 3, 4, or 1, 2, 5 or 1, 4, 6 were found. 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 with the help of SPSS windows-12 version.

Results

A total of 560 patients of OA knee were included in the study. Out of these, 326 (58.2%) were males and 234 (41.8%) were females (Figure-1). The male: female ratio was 1:0.72.

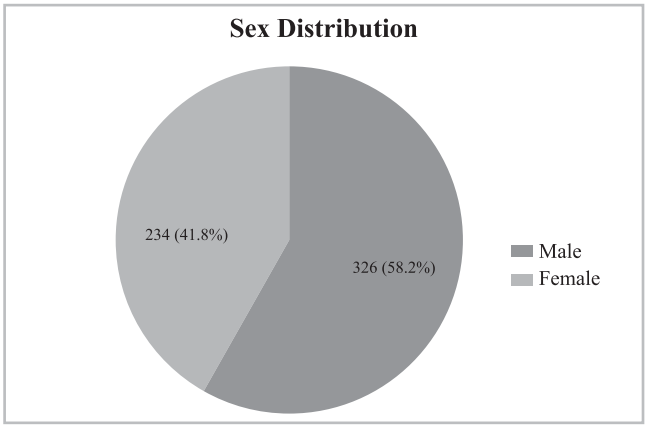

Figure-1: Sex distribution

Age: Most of the patients were in the age group of 40 years to 59 years (Figure-2). On the other hand, it was found that maximum females were affected in their earlier ages between 40 years to 50 years age; but most of the male persons were affected in their late ages between 55 years to 65 years age.

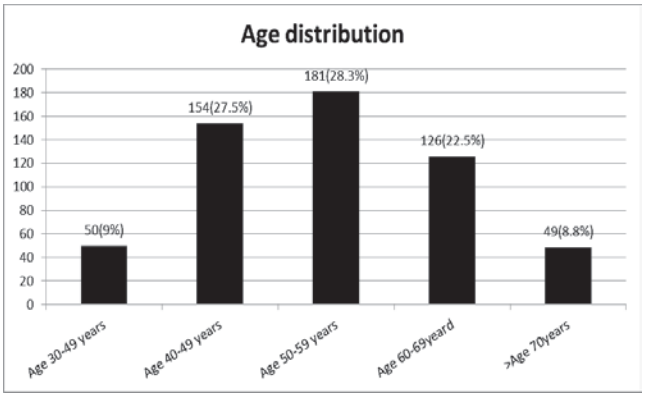

Figure-2: Age distribution

Occupation: A majority of the patients were cultivator 9.8%, labourers 7.1%, businessman 6.5%, teachers 4.2% and imams 1.9% (Figure-3).

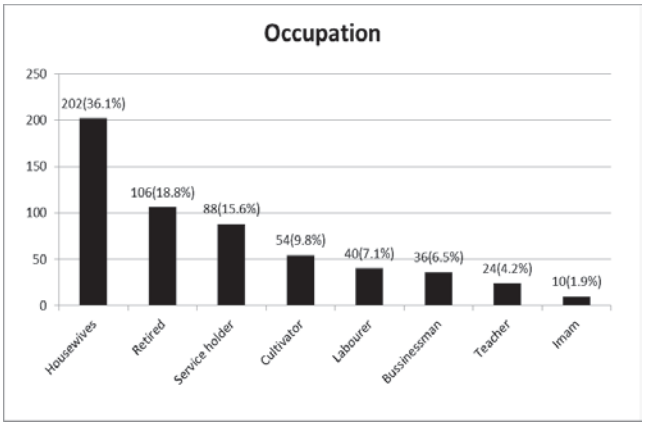

Figure-3: Occupation

Socio-economic condition: Most patients were in the middle class group 69.1%, their monthly income was in between Bangladeshi taka (BDT) 7000 to 15000. Some patients were poor 26.4%, their monthly income was less than BDT 6000 and a very few patients were rich 4.5 %, their monthly income was more than BDT 15000 (Figure-4).

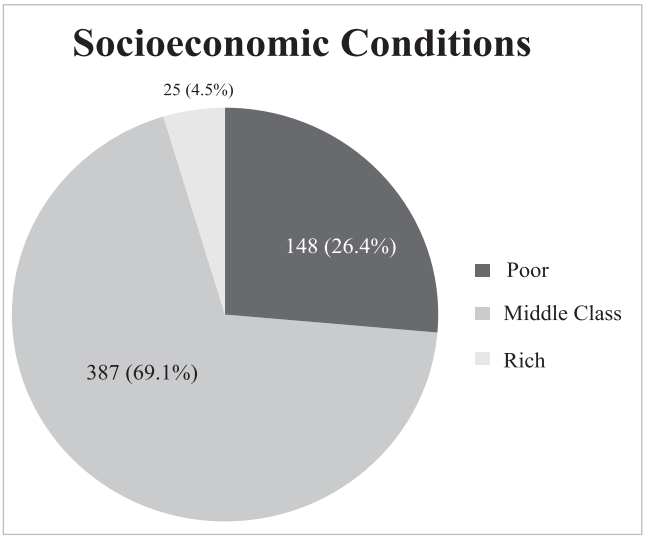

Figure-4: Socioeconomic conditions

Catchment area

Most of our study subjects 483(86.2%)) came from outside of Bogura city and the rest came from Bogura city 77(13.8%) (Figure-5).

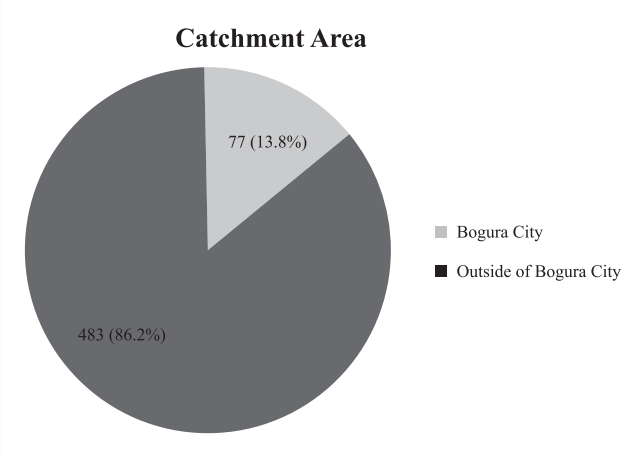

Figure-5: Catchment area

Clinical characteristics: Most patients gave the history of gradual onset of the pain 88.1%, some gave the history of sudden onset 6.7% and some gave the history of pain in the knee after trauma 5.2%. Most of the patients had no morning stiffness in the knee 89.5% and some had the morning stiffness 10.5% but it was less than one hour. Maximum patients had the pain intermittent in character 61.4% but 38.6% of patients had the pain constant in character. It was found that most of the study subjects were suffering from both sided knee OA 47.8%, 29.3% patients were suffering from right sided knee OA and 22.9 % patients were suffering from left sided knee OA. Most of the subjects 51.8% presented with no swelling, 38.7% showed unilateral and 9.5% showed bilateral involvement at presentation (Table-1).

Table-I: Clinical characteristic

Clinical characteristic:		Number	Percentage (%)
Onset	Gradual	493	88.1
	Sudden	38	6.7
	Post traumatic	29	5.2
Stiffness	No morning stiffness	501	89.5
	Gelling	59	10.5
Pain character	Intermittent	344	61.4
	Constant	216	38.6
Site	Both knee-	268	47.8
	Right knee	164	29.3
	Left knee	53	22.9
Swelling	No swelling	290	51.8
	Unilateral	217	38.7
	Bilateral	53	9.5

Discussion

In this study, total number of patients were 560, out of them 326(58.2%) were male and 234(41.8%) were female. The male: female ratio was 1:0.72. In a study at Chittagong, Bangladesh, it was found that 61 % of the patients were males and 39% were females.[11] In another study it was found that 64.80 % of the study subjects were males and 35.20 % were females.[12] This is in favour of the findings of our study. Although men and women are equally prone to develop knee OA, but more joints are affected in women than men.[13] The male preponderances may be due to more male attendance in the hospital than female because of social and religious belief. In our study, most of the patients of knee OA were at the age group of 40 to 59 years. In the other two studies, most of the subjects were of 50 years to 59 years age group.[11, 12] This is to some extent close as the result found in the present series. On the other hand, it was found in our study that most of the female patients were affected with OA-

knee in their earlier ages between 40 years to 50 years age; but most of the male patients were affected in their late ages between 55 years to 65 years age. This may be due to occupation of the female as they usually works with knee bent position in their house. In a study at Chittagong, Bangladesh, it was found that most of the patients of knee-OA were house wives 31.5%) [13]. This is in favour of the findings of the present study. Retired serviceman became the second 81.8 % in the present series. In two other studies, the same results were found. [11, 12] In our study, maximum patients were in the middle class group 68.5% and a very few patients were rich 4.5 %. This is so because most of the rich people are being consulted in private clinics. Regarding the sides affected by OA-knee, it was found in this study that most of the study subjects were suffering from both knees OA 47.8%, 29.3% right sided knee OA and 22.9% left sided knee OA. In a study in Chittagong, it was found that all the subjects were affected by OA- knee on both sides[14]. We also found most of the patient 51.8% were presentedwith no swelling of the knee.

Conclusion

We can say at conclusion that OA knee affects female patient at an earlier age than that of male. It is also evident from this study that it is a common degenerative joint disease among people of 5th and 6th decade.

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