

OCCUPATIONAL RISK FACTORS IN KNEE OSTEOARTHRITISV. Muralidhara¹¹Associate Professor, Department of Orthopaedics, Sree Siddhartha Medical College, Tumkur.**ABSTRACT****INTRODUCTION**

Osteoarthritis (OA), also often called "osteoarthrosis" or "degenerative joint disease" is the most common form of arthritis.

MATERIALS AND METHODS

Present retrospective statistical study was conducted at the Department of orthopaedics in a tertiary care hospital (Catering to a largely agricultural population) over a period of 2 years from January 2012 to December 2014.

RESULTS

Prevalence of osteoarthritis common in farmers accounting to 70%. Other occupations at risk of OA of knee were, Teachers 12%, Housewives 08%, Athletes 04%, Policemen 04% and Drivers 02%. It is in conformity with most previous studies reviewed.

CONCLUSION

Osteoarthritis of Knee is a major health issue and important cause of disability in elderly population. Occupational risk factors are important in development of osteoarthritis.

KEYWORDS

Osteoarthritis (OA), Knee joint, Prevalence.

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INTRODUCTION: Osteoarthritis (OA), also often called "osteoarthrosis" or "degenerative joint disease" is the most common form of arthritis.⁽¹⁾ Globally, OA is the eighth leading cause of disability.⁽²⁾ Age is the strongest risk factor for osteoarthritis of all joints.⁽³⁾ OA is a leading cause of disability and loss of human labour in society.⁽⁴⁾ OA has a multifactorial aetiology and can be considered the product of an interplay between systemic and local factors.⁽⁵⁾ Knee osteoarthritis is the most common form of arthritis.⁽⁶⁾ Prolonged or repeated knee bending is a risk factor for knee OA and the risk is higher in jobs which entail knee bending and mechanical loading.⁽⁷⁾

MATERIALS AND METHODS: A retrospective study was conducted at the Department of Orthopaedics in a tertiary care hospital over a period of 2 years from January 2013 to December 2014. Study population of 850 patients in the age group of 40-80 years with clinical and radiological diagnosis of osteoarthritis, affecting the knee joint were included in this study.

RESULTS: Out of 850 patients in the present study, 561 (66%) were female patients and 289 (34%) were male

patients. Table 1 shows sex wise distribution of cases with osteoarthritis of knee joint. Majority (42%) were in 71-80 years age group. Table 2 shows age wise distribution of patients with osteoarthritis affecting knee joint. Prevalence of osteoarthritis was common in farmers accounting to 70%. Other occupations at risk of OA of knee were, Teachers 12%, Housewives 08%, Athletes 04%, Policemen 04% and Drivers 02%. Table 3 shows occupational distribution of patients with osteoarthritis.

Gender	Total number	Percentage (%)
Female	561	66
Male	289	34

Table 1: Showing sex profile of patients with osteoarthritis of knee joint

Age group	Total number	Percentage (%)
40-50	110	13
51-60	170	20
61-70	212	25
71-80	357	42

Table 2: Showing age wise distribution of patients with osteoarthritis of knee joint

Occupation	Total number	Percentage (%)
Farmers	595	70
Teachers	102	12
Housewives	68	08
Athletes	34	04
Policemen	34	04
Drivers	17	02

Table 3: Showing distribution of patients with osteoarthritis of knee according to occupation

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DISCUSSION: Worldwide prevalence of symptomatic OA is 9.6% among men and 18% among women. ⁽⁸⁾ Almost every age group is affected by OA, but the prevalence increases dramatically after the age of 50 years in men and 40 years in women. ^(9,10)

In the present study the prevalence of OA increased with age as maximum number of patients were seen in 71-80 years age group as compared to studies by Shadab et al, majority, 199 patients were above 60 years ⁽¹¹⁾ and Ukibe et al, 34% of the OA patients were in 64-75 year age group. ⁽⁴⁾ In a study by Patil S et al 33% of the patients were more than 60 years. ⁽¹²⁾

OA is more common in female patients in present study (66%) as compared to the studies by Ukibe et al (34%), Shadab et al (61.54%), Patil PS et al (65.7%) and Radha et al (66%). ^(4,11,12,13) OA strikes women more than men and it increases in prevalence, incidence and severity after menopause. ⁽¹⁴⁾ Data from Women's Health initiative showed that, women on oestrogen replacement therapy was 15% less likely to require Total Knee or Hip arthroplasty than those not taking such therapy. ⁽¹⁵⁾

Knee OA is more common in all types of arthritic conditions. ⁽¹¹⁾ Occupations characterised by prolonged periods of knee bending and squatting might also increase the risk of meniscal or ligamentous damage to the knee, and such lesions are known risk factors for knee osteoarthritis. Obesity, knee injury and meniscectomy are established risk factors. ⁽¹⁶⁾ In the present study prevalence of OA was highest in farmers accounting for 70% cases as compared to the study by Ukibe et al in which 60% of the patients were farmers. ⁽⁴⁾ This may be due to manual labour involved in agriculture with frequent knee joint bending. Prevalence of OA in teachers was 12% in the present study forming the second most common group because their profession demanded long standing for more than 5 hours per day. Third group comprised of housewives accounting for 8% but in a study by Shadab et al prevalence of knee OA was highest in Housewives accounting to 57.59%. ⁽¹⁰⁾ Athletes had history of previous knee injury and the prevalence of OA in the present study was less common in policemen (4%) and drivers (2%).

CONCLUSION: Osteoarthritis of Knee is a major health issue and important cause of disability in elderly population. Occupational risk factors are important in development of osteoarthritis. There is a need in the society to create awareness on modifiable risk factors like the right usage of knee during routine activities and importance of daily exercises to prevent osteoarthritis of knee.

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