Research Article

PREVALENCE OF OSTEOARTHRITIS AMONG GERIATRIC POPULATION IN HUBLI

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ABSTRACT

Background: Among the chronic rheumatic diseases, hip and knee osteoarthritis (OA) is the most prevalent and is a leading cause of pain and disability in most countries worldwide. It's prevalence increases with age and generally affects women more frequently than men. OA is strongly associated with aging and heavy physical occupational activity, a required livelihood for many people living in rural communities in developing countries. Determining region-specific OA prevalence and risk factor profiles will provide important information for planning future cost effective preventive strategies and health care services.

Materials and Methods: The primary data was collected from the subjects/patients consulting SDM Hospital, Dharwad. A cross-sectional research design was used for this study.30 participants have been selected for this study purpose. Kellgren and Lawrence Scale of Knee Osteoarthritis was used to collect data.

Results: The results of this study show that most of the aged people in Karnataka suffer from knee osteoarthritis as it is a degenerative disorder and is more commonly seen in obese and more in women who go through menopause often gain weight and the increased stress on the joints may rise in osteoarthritis seen among women after age 55.

Discussion: This degenerative disorder seems to be increasing day by day as it is seen aged, young adults above 45 years of age and in women due to menopausal contradictory results. In this study Grade 2 OA is the highest in number due to more bone spur growth and though the space between the bones appear normal and when the patient's starts experiencing joint pain, the area around the knee joint becomes stiff and uncomfortable, particularly when sitting for an extended period. The various risk factors are repetitive movement of joints, obesity, infection and heavy weight lifting.

Conclusion: After going through the results it is concluded that the prevalence of knee osteoarthritis is increasing as they get aged and common in women as they go under menopausal issues and the stress on joints which rises in osteoarthritis disorder.

INTRODUCTION

Osteoarthritis (OA) is a chronic degenerative disorder of multifactorial etiology characterized by the loss of articular cartilage, hypertrophy of bone at the margins, subchondral sclerosis and range of biochemical and morphological alterations of the synovial membrane and joint capsule.[1]

Pathological changes in the late stage of OA include softening, ulceration and focal disintegration of the articular cartilage. Synovial inflammation also may occur.[2,3] Typical clinical symptoms are pain, particularly after prolonged activity and weight-bearing; whereas stiffness is experienced after inactivity.[2] It is probably not a single disease but represents the final end result of various disorders leading to joint failure.[1,2] It is also known as degenerative arthritis, which commonly affects the hands, feet, spine and large weight bearing joints, such as the hips and knees.[1,2]

Most cases of OA have no known cause and are referred to as primary OA.[3] Primary osteoarthritis is mostly related to aging.[1,2] It can present as localized, generalized, or as erosive OA.[3,4] Secondary osteoarthritis is caused by another disease or condition.[4]

Osteoarthritis is the second most common rheumatologic problem and it is the most frequent joint disease with a prevalence of 22% to 39% in India.[1,3] OA is more common in women than men, but the prevalence increases dramatically with age.[1,2,5] Nearly, 45% of women over the age of 65 years have symptoms while radiological evidence is found in 70% of those over 65 years.[2,4,5].

METHODOLOGY

The primary data was collected from SDM College of Physiotherapy, Dharwad, Karnataka. The data was collected from the 30 geriatric population who have voluntarily taken part in the study are the geriatrics and who predominantly visited SDM hospital for the OA knee complaints. The study took about one month to complete from 1st July 2021 to 31st July 2021.For the collection of data age, sex, height, weight, X-rays and body mass index was calculated and grade of osteoarthritis was decided based on the Kellgren and Lawrence

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Scale Of Osteoarthritis. All the data collected were taken and accumulated in a single excel sheet for the purpose of grades of OA knee.

RESULTS

After collecting 30 samples from the subjects using the method to evaluate the grades of knee osteoarthritis explained in the Kellgren and Lawrence Scale of Osteoarthritis the results were calculated using MS Excel Sheet. Table 1 outlines the breakdown of age, weight, height and BMI and shows that the average age of the participants in the study was between or more than 55 years of age. Among the 30 participants 46.66% were men and 53.33% were women which equated to 14 men and 16 women. Furthermore the general BMI of the patients/subjects ranged from 19 to 37 all of which can be seen in the table below. After the calculations of the grades of knee osteoarthritis they were categorized into normal, overweight, obese class 1, obese class 2 category. The percentage of people that fall in each category is shown in the table 2.

Table 1 Characteristics of Participants

Parameter	Value
Age (y)	32 ± 12.47
Weight (kg)	59.93 ± 13.08
Height (m)	1.59 ± 0.07
BMI	23.54 ± 3.94

Table 2 Percentage of subjects falling in different grades

Grades	Number Of Subjects
Grade 1	10%
Grade 2	56.67%
Grade 3	20%
Grade 4	13.33%

DISCUSSION

The aim of present study was to examine prevalence of knee osteoarthritis among geriatrics population of the age group more than 55 years of age. It is the most common joint disease, is age related, affecting more than 80% of people older than age of 55.Osteoarthritis of the knees is common and risk is strongly linked to the body mass index.[6] Symptoms include pain with walking, standing up from a chair, climbing or descending stairs, and stiffness after periods of rest. Patients will typically report pain that is increased with activity and relieved by rest, although rest pain occurs in advanced disease. "Gelling"- stiffness that occurs after any period of rest- is also common. Morning stiffness, when present, rarely lasts more than 30 minutes. In our study, prevalence of Grade 1 OA was 10%.It might be because of development of very minor wear and tear and bone spur growths at the end of the knee joint at the very early stage.

Grade 2 OA was present in 56.67% which could be due to more bone spur growth though the space between the bones appear normal, but when patient started experiencing symptoms of joint pain, there was stiffness around the knee joints and they would feel uncomfortable, particularly when sitting for an extended period, after rising from the bed. Grade 3 OA was 20% probably due to obvious erosion to the cartilage surface between bones and fibrillation which narrows the gap between the bones. Grade 4 OA was 13.33% which could be due to considerable reduction in joint space between the bones, causing the cartilage to wear off, leaving the joint stiff and leads to a chronic inflammatory response, with decreased synovial fluid that caused friction, greater pain and discomfort while walking or moving the joint.

CONCLUSION

In our study, prevalence of Grade 1 OA was 10% probably due to very minor wear and tear and bone spur growths at the end of the knee joint at the very early stage. Grade 2 OA was present in 56.67% probably due to more bone spur growth though the space between the bones appear normal. Grade 3 OA was 20% probably due to obvious erosion to the cartilage surface between bones and fibrillation which narrows the gap between the bones and Grade 4 OA was 13.33% which could be due to considerable reduction in joint space between the bones, causing the cartilage to wear off, leaving the joint stiff and leads to a chronic inflammatory response, with decreased synovial fluid that caused friction, greater pain and discomfort while walking or moving the joint.

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