Original Research Article

Prevalence And Pattern Of Diseases Among The Patients Attending Orthopaedic OPD At A Tertiary Level Care Hospital: A Hospital Based Study

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Abstract:
Introduction: Pattern and prevalence of orthopaedic problems varies from region to region, due to difference in environmental, racial and geographic factors. Knowing the extent of a problem and identifying the factors contributing to it is imperative in devising a preventive or curative measure for a specific issue affecting our population.

The orthopaedic out-patient department of a tertiary care hospital plays a crucial role in the health care system as it attends to a large number of patients. The goal of the study is to observe the etiological patterns of common issues that prevail in an Orthopaedics OPD of a hectic tertiary care hospital, which could in turn help to understand the distribution of illnesses in a particular geographical area.

Materials and Methods: A retrospective cross-sectional study was conducted among orthopedic outpatients at the tertiary care hospital at western Maharashtra. Analysis of 2200 patients OPD records data were extracted from patients records over 6 months (October 2023 to June 2024).

Results: A total of 2200 patients were studied for their chief complaint diagnosis, and the study discovered that most patients (59%) were males and 41% were female Acute and chronic back ache were the most common diagnosis (26.2%), followed by arthritis (21.41%), sports injuries (12.1%), ligamentous sprains (10.40%), tendinopathies (8.9%), non-specific body aches (7.1%), Joint stiffness (4.5%), post-operative follow-up (4.2%), bone fractures (4.1%) and neuropathies (1.1%). Men are significantly more likely to develop arthritis, joint stiffness, sports injuries, osteoporosis, and tendinopathies than women. In contrast, women commonly suffer from spondylosis, soft tissue injuries, scoliosis, neck pain, lower back pain, and fractures. Furthermore, females are far more likely than males to be directed to the physiotherapy department.

Conclusion: Despite being confined to a single institute and not fully representing the true epidemiology of orthopedic problems in society, this study can still be considered indicative of the trends in orthopedic cases seen in our outpatient department, due to our extensive patient coverage across the state.

Keywords: Orthopedics Problems, Epidemiology, Trauma, health care, Joint stiffness

INTRODUCTION:

The orthopedic department's importance in trauma care at tertiary care facilities is paramount, as it deals with numerous fractures and soft tissue injuries in urgent cases.[1] As a vast and complex branch of medicine, orthopedics treats more than just fractures and soft tissue injuries; it also manages numerous musculoskeletal conditions that heavily populate the orthopedic outpatient department in any hospital.[2] In India, approximately 20,000 new cases of spinal cord injuries occur each year, with 60-70% of the affected individuals being illiterate and poor villagers.[3] An audit of a hospital's medical system is a cornerstone of quality control, similar to any other quality control system.[4] In medical audits, analyzing patients' hospital visits is essential, as it reveals patient patterns and frequencies that can help in developing better patient care plans.[5,6]

The prevalence and pattern of orthopedic complaints can vary across different regions due to racial, environmental, or geographical peculiarities. Understanding the extent of these problems and the factors associated with them is crucial for designing and implementing effective curative and preventive measures for the specific issues affecting the population in our area[7]. Most trauma cases necessitate hospitalization followed by surgery. After a few days, patients are discharged and referred to the orthopedic outpatient department (OPD) for further evaluation of healing or to monitor for any complications that may arise.[1]

The present study provides baseline statistical information on contemporary orthopedic outpatient load, highlighting the most common orthopedic issues encountered in clinics. This data aims to identify areas for improving the quality of care. Additionally, the information can assist policymakers in developing guidelines to address the increasing burden of orthopedic problems.

MATERIALS AND METHODS:

A retrospective cross-sectional study was conducted to evaluate the pattern of orthopedic diseases among patients attending orthopedic outpatient clinics at the tertiary care hospital at western Maharashtra. Analysis of 2200 patients OPD records data were extracted from patients records over 6 months (October 2023 to June 2024). The samples were randomly selected using the randomization method. Selected patient files were enrolled in the study to ensure a robust and comprehensive data set.

Patients with incomplete or missing data were excluded from the study. Demographic data Age, gender, diagnosis, upper or lower limb involvement, and physiotherapy referrals were all extracted from patient files in the system. Microsoft Excel was used for tabulating and cleaning the data.

RESULTS:

A total of 2200 patients were studied for their chief complaint diagnosis, and the study discovered that most patients 59% were males and 41% were female.(Table1). Acute and chronic back ache were the most common diagnosis (26.2%), followed by arthritis (21.41%), sports injuries (12.1%), ligamentous sprains (10.40%), tendinopathies (8.9%), non-specific body aches (7.1%), Joint stiffness (4.5%), post-operative follow-up (4.2%), bone fractures (4.1%) and neuropathies (1.1%). (Fig 1) In this study with 60% of patients belonging to age group of 21- 60 years. 40% patients were having chronic diseases. Men are significantly more likely to develop arthritis, joint stiffness, sports injuries, osteoporosis, tendinopathies, and enthesopathies than women. In contrast, women commonly suffer from spondylosis, soft tissue injuries, scoliosis, neck pain, lower back pain, and fractures. Furthermore, females are far more likely than males to be directed to the physiotherapy department. Based on the duration of chief complaints noted.(Table 2)

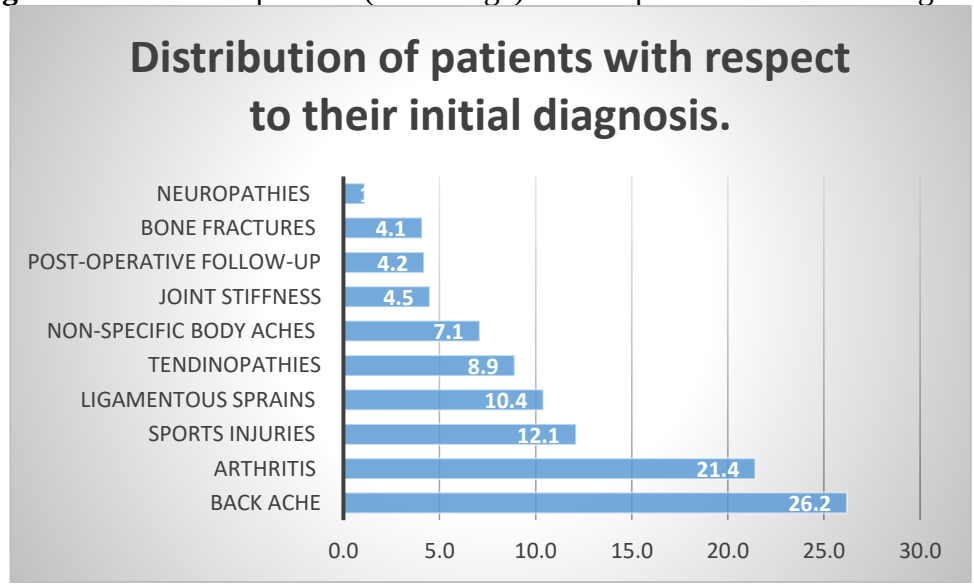
Table 1: Gender distribution of patients attending the orthopedic OPD

Males	1298 (59%)
Females	902 (41%)
Total	2200

Table 1: Based on the duration of chief complaints noted

Duration of the Symptom	Patients (%)
Less than a week	248 (11.27%)
1-2 weeks	384 (17.45%)
2 -12weeks	650 (29.54%)
More than 12 weeks	918 (41.72%)

Fig 1. Distribution of patients (Percentage) with respect to their initial diagnosis.



DISCUSSION:

Indeed, the pattern and prevalence of orthopedic problems can vary significantly from one region to another. This variation is often influenced by a range of environmental and demographic factors, including climate, occupational activities, lifestyle, access to healthcare, and socioeconomic status. Globally, musculoskeletal diseases are among the leading causes of disability, which prompted the establishment of the Bone and Joint Decade.[8] In most of the studies found that arthritis, osteoarthritis, and back pain significantly contribute to disability-adjusted life years (DALYs) in both developed and developing countries.[9,10] In the study conducted by Sharat Agarwal et al.
on childhood orthopedic problems, it was found that trauma was the main factor responsible for bringing children to medical centers. This highlights the significance of injury-related issues in pediatric orthopedic cases and underscores the importance of addressing safety and preventive measures in environments where children are active.[11] In this study with 60% of patients belonging to age group of 21- 60 years. This age group represents the most active and productive segment of the population, which could explain the higher prevalence of orthopedic problems. This age group is typically very active and engaged in various physical activities, both occupational and recreational.

The study also highlighted that 41.72 % of patients had orthopedic problems lasting more than 12 weeks, indicating the chronic nature of issues such as low backache, osteoarthritis of the knee, and osteomyelitis. Additionally, post-surgical recovery for fractures to regain full pre-injury functional status often takes more than three months, while soft tissue injuries typically heal within this period.

In the study, it was found that 26.2 % of patients presented with spinal pain, with lower back pain (LBA) being the most prevalent, followed by cervical spine pain and then dorsal region pain. A few patients also reported coccydynia. Most of these patients had a history of minor trauma. Among those with neurological deficits, significant trauma, mainly from road traffic accidents (RTA), was a common factor, which aligns with findings from other studies.[12-14] Frozen shoulder is the most common cause of joint stiffness, and it is most frequently associated with diabetes mellitus. The prevalence may be attributed to occupations that involve prolonged periods of sitting at desks, as well as the increasing use of smartphones and computers may lead to Neck muscle pain[15]. This study also emphasizes regional differences, which are crucial for understanding the prevalent patterns of disorders in a specific area and for adopting appropriate preventive measures.

Conclusion:

Our study offers a broad perspective on the range of orthopedic problems observed in a tertiary care setting. This insight could assist in creating better protocols and strategies for managing orthopedic disorders at such facilities. Although this study may not accurately reflect the overall epidemiology of orthopedic issues in society due to its focus on just one institution, it does provide a trend analysis of the orthopedic problems presented to our outpatient department, as we cater to patients from a large area of the northern and western part state.

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