

## Pattern & Prevalence of Orthopaedic Outdoor patients at a tertiary level care Hospital in Jammu, India

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### Abstract

Pattern and prevalence of orthopaedic problems varies from region to region, due to difference in environmental, racial and geographic factors. To our knowledge, no study had been conducted in this region to study the various orthopaedic problems and the trend of presentation with respect to demographic and environmental factors. To study the magnitude & impact of a particular type of orthopaedic problem in this region & to know the need of developing better preventive and therapeutic protocols including start of specialized orthopaedic clinics. A prospective study was conducted in the department of orthopaedics at govt. medical college, jammu and 524 consecutive patients attending the orthopaedic opd were included in the study. Overall, male : female ratio was 1.45 in our study with 67% of patients belonging to age group of 21- 60 years. 40% patients were having chronic diseases and 33% patients presented to opd after an episode of trauma. Majority of patients(26% ) patients presented to our opd with spine pain especially low backache. Our study has given the bird's eye view of various orthopaedic problems as may be found in a tertiary level care setting. This may help in formulating better protocols and strategy for managing orthopaedic disorders in a tertiary level care setting. Though this study may not be a true representation of epidemiology of orthopaedic problems in the society, as it is restricted to one institute only, it can be taken as a trend of presentation of different orthopaedic problems to opd, as we receive patients from a vast area of the state.

### Key Words

Orthopedics Problems, Epidemiology, Trauma

### Introduction

Orthopaedics forms an important part of tertiary level care hospital, providing management for trauma patients with fractures, soft tissue injuries, deformities, congenital bone and joint problems etc. Usually, the orthopaedic problems need some time for healing before the patient can resume his/her duties, adding to financial/occupational burden on the patient. Most of the trauma cases need admission followed by surgical intervention, the patients are discharged after few days, to follow orthopaedic opd for further assessment of healing or to check for any complication, if any develops. Furthermore,

orthopaedic opd has got a huge rush of patients with low backache, pain in knees/hips/shoulders, paediatric patients with congenital problems etc.

The prevalence & pattern of orthopaedic complaints may vary in different regions due to racial, environmental or geographical peculiarity in the region. It is imperative to know about the extent of problem, the factors associated with it, so as to design and implement any curative/preventive measure for a particular problem affecting the population in our area. In one of the studies, it was pointed out that children of younger and less

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educated parents have high risk of injury (1). In India, approximately 20,000 new cases of spinal cord injuries are included every year, 60 - 70% of them are illiterate, poor villagers (2).

This study was designed to find out the pattern and type of presentation of patients, in orthopaedic OPD with reference to gender, duration of symptoms, new/followup cases, rural/urban background in the patients with bone and joint problems.

This study has been undertaken to find out the pattern, prevalence/causes of various orthopaedic problems like musculoskeletal trauma, congenital, metabolic, infective conditions and the demographic profile of orthopaedic patients attending our OPD at GMC, Jammu, so that we should be able to formulate a strategy for preventing orthopaedic problems by targeting modifiable risk factors, provide better treatment options as per literature, prescribe standard drugs as needed to make medical care rational and cost effective (3-4). Thus the current study was undertaken to study the magnitude & impact of a particular type of orthopaedic problem in this region, to identify preventable risk factors, to provide health education, basic treatment, & referral pathways, to

**Table.1 Distribution of Patients as Per Gender**

SEX	No. of Patients	Percentage
Male	310	59.16
Female	214	40.84

design better protocols for investigations & treatment of these particular disorders, to increase the awareness about bone & joint problems affecting the community, to know the need of developing specialized orthopaedic clinics and to have a better planning in health care delivery.

### Material and Methods

A prospective study was conducted in the department of orthopaedics at Govt. Medical College, Jammu from May 2015 to Sept 2015, which is the only tertiary level care centre of Jammu region, catering to 10 districts. 524 consecutive patients attending the orthopaedic OPD

**Table.2 Distribution of the Patients into Various Age Groups**

AGE GROUP	0 -10 yrs	11-20 yrs	21-40 yrs	41-60 yrs	> 60 yrs
MALES	22	68	110	84	26
FEMALES	6	30	76	80	22
No. of pts	28	98	186	164	48
%age	5	18.7	35.49	31.29	9.1

**Table.3 Distribution of the Patients As Per Urban & Rural**

ORIGIN	No. of patients	Percentage(%)
RURAL	320	61
URBAN	204	39

**Table.4 Distribution of Patients as per the Duration of Symptoms Presenting to OPD**

DURATION OF SYMPTOMS	Nos.	Percentage(%)
< 1 week	62	11.8
1 – 3 weeks	72	13.7
3 weeks – 3 months	180	34.35
> 3 months	210	40.07

**Table.5. Distribution of Patients as Per Chief Complaint/ Diagnosis**

Diagnosis	No. of pts	Percentage(%)
Congenital problems	8	1.5
Soft tissue injuries	32	6
Operated # cases	88	16.8
Conservative # cases	56	10.68
Spine pain	138	26.33
Osteoarthritis knee	38	7.25
Shoulder pathology	30	5.7
Infective cases	26	5
others	108	20.6

were included in the study. In each case, relevant history was taken, clinical examination was done &

**Table. 6. Distribution of patients, whether a new case or a follow up case**

	Nos.	Percentage(%)
New case	236	45
Follow up case	288	55

**Table.7. Distribution of patients, whether trauma was a contributory cause to their complaints**

	Nos. of pts	Percentage(%)
Traumatic	206	39
Nontraumatic	318	61

relevant investigations were advised to reach to a diagnosis. Data was collected from the patients with regarding to their age, gender, duration of symptoms, diagnosis, follow up case or new case & rural/urban background. All this data was collected as per the pre-structured proforma. Data generated was subjected to analysis subsequently.

### Results

The results of the current study are depicted in *Table-1 to 7*

### Discussion

Pattern and prevalence of orthopaedic problems varies from region to region, due to difference in environmental and demographic factors. Not many studies have been conducted in this region to study the various orthopaedic problems and the trend of presentation with respect to demographic and environmental factors.

In previous studies, it has been found that some problems develop in a certain age group, depending on activity level of patients as well. It has been seen that trauma especially RTA was responsible for most fractures in young active adults and children, pathological fractures developed more in elderly patients with risk factors for osteoporosis. childhood problems like osteomyelitis, rickets, and injuries had some correlation to geographically defined communities.

Sharat agarwal et al. in his study on childhood orthopaedic problems found that trauma was main factor

responsible for bringing a child to a medical centre(5).

Roop singh et al. in his study on spinal cord injuries concluded that there is a need to identify the risk factors and to take steps to control them by disseminating information to masses, to train paramedical staff in rural areas about initial handling and transportation of patients having spinal cord problems(6)

Shankar PR et al. in his study on drug prescription in orthopaedic patients found that low backache was the main reason for attending opd, and NSAIDS were the most commonly prescribed drug group(7).

Our study revealed that more male patients attended orthopaedic opd than females, signifying men being more exposed to risk factors as men are more active on account of occupation. the percentage of males and females more than 40 yrs of age attending opd is similar, may be due to degenerative conditions affecting spine and knees in females.

In paediatric age group, it was found that more male patients(90 patients;71%) attended orthopaedic opd due to multiple reasons, with incidence of trauma being more common in male children. In a study in germany on accidents in children, it was found that boys had 33% more accidents than girls and the most common mechanism of injury was fall(8). Rehman R found in his study of childhood injuries seen at the emergency department in Pakistan that boys experienced significantly higher rates than girls at home and that the most common mechanism of injury was fall (9).

Overall, male : female ratio was 1.45 in our study which is comparable to other recent studies, but reflects a changing trend when compared to studies 15 - 20 yrs back as females are becoming more active and outgoing now.

67%(350 patients) of patients belonged to age group of 21 - 60 yrs, as this constitutes the most active and productive age group .

61% of patients belonged to rural areas with only 39% from urban areas. this may be a bias perhaps as people from urban areas might be getting better care in private set up. Also, patients from rural areas are being referred

directly our hospital as this is the only tertiary level care hospital in this region.

40% of patients had the problem for more than 3 months, suggesting chronic nature of problems like low backache, osteoarthritis of knee, osteomyelitis etc. also, to mobilise the patient fully to pre- injury functional status after a surgery for a fracture, it takes more than 3 months. soft tissue injuries, usually heal by 3 months.

About 33% of patients attending opd had suffered trauma with 6% having only soft tissue injuries. 27% of patients had developed fracture following trauma, which was managed conservatively by POP cast(11%) or surgically(16%). in adults, RTA was the most common cause for trauma followed by fall from a height.

About 1.5% patients were having congenital problems, CTEV being the commonest.

26 % patients presented to our opd, suffering from spinal pain, mainly LBA, followed by pain cervical spine followed by dorsal region pain. Few patients were having coccydynia. In most of these patients, there was history of trivial trauma. In patients with neurological deficit, most of patients had suffered significant trauma mainly RTA which correlates to other studies (10- 12).

Other problems with which patients reported to our opd ,were suffering from chronic problems like tennis elbow, OA knee, frozen shoulder, joint pains, gouty arthritis, etc.

5 % patients were suffering from infective pathologies like osteomyelitis, tuberculosis etc.

About 55 % patients were fresh cases and 45 % patients follow up cases.

### Conclusion

Our study has given the bird's eye view of various orthopaedic problems as may be found in a tertiary level care setting. This may help in formulating better protocols and strategy for managing orthopaedic disorders in a tertiary level care setting. Though this study may not be a true representation of epidemiology of orthopaedic problems in the society, as it is restricted to one institute only, it can be taken as a trend of presentation of different orthopaedic problems to our opd, as we receive patients from a vast area of the state.

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