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# Morbidity pattern among patients attending Orthopedic OPD at IQ City Medical College, Durgapur

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***Abstract:*** *Morbidity is defined as any departure from the state of well being. The demographic variables determine the prevalence and incidence of certain diseases. If a pattern can be established for the relationship between occurrence of certain diseases and the demography of the given area then long term plans for best utilization of available health resources can be formulated. We have conducted our study keeping this aim in our mind to collect and analyze the demographic profile of patients coming to orthopaedic OPD of IQ City Medical College, Durgapur. We collected the data pertaining to demographic profile (i.e. name, age, sex, caste, religion, education) and disease (type, traumatic / nontraumatic, duration of symptom,etc.)from 360 patients attending the orthopaedic OPD between July-August 2018. After analysing the data collected, we inferred that majority were male patients (52.2%) and belonged to the 31-60 years age group (61.1%). 93.4% of our patients were literate and 51.1% of them were from urban areas. Most of the patients had diseases of non-traumatic origin (82%) and they had their symptoms for more than one month (68.9%). We found spine problems to be the single most common complaints of the patients and knee problems were 2nd in the list. Though our study had its limitation of being localised to a single institute and conducted in a small sample size over a short duration of time, it still gives an overview of the morbidity pattern of the population of the area and can serve as a guide for the authorities and health professionals to work towards better delivery of health services.*

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## I. Introduction

Morbidity is any departure, subjective or objective, from a state of physiological well being. It is equivalent to terms like sickness, illness, disability etc. The three aspects of morbidity which are commonly measured are frequency, duration and severity.[1] Orthopedics department forms an essential part of a tertiary care hospital. Patients coming to casualty for orthopedic consultation in the emergency department are mostly post trauma patients having bone or ligament injury alone or with injury to other structures like the brain, abdominal organs, etc. Such patients most of the time need admission and subsequent operative treatment by a trauma team. On the other hand, patients coming to orthopedics OPD have an altogether different medical profile. Here patients come with numerous problems such as musculoskeletal pain, injuries to limbs and joints, swelling of limbs and joints, congenital deformities, gait disturbances, etc.[2,3] Post operative follow up patients also come in large numbers to the orthopedics OPD.

The frequency of any complains or diagnosis differs from one set up to the other due to racial, environmental and geographical disparity.[3,4] A thorough analysis of morbidity pattern in a health care setting provides an efficient tool for formulation of policies. It also provides prospects for timely intervention to monitor the progress of any disease and also helps in optimal use of the limited resources available. Keeping this in mind, the present study was conducted with the aim to assess the morbidity pattern among the patients attending the orthopedics OPD at IQ City Medical College and NM hospital, Durgapur and to determine the socio-demographic profile of those patients.

## II. Material and Methods

The present study was a cross-sectional one, carried out in the outpatient department of Orthopedics of IQ City Medical College and NM Hospital, Durgapur. Patients of all age groups who attended the orthopaedics OPD were included in our study.

**Study Design**: Observational, Cross-sectional study.

**Study Location:** This was a hospital based study carried out in Outpatient department of orthopaedics of IQ City Medical College & NM hospital, Durgapur.

**Study Duration:** July – August 2018.

**Sample size:** 360

**Sampling Technique:** Consecutive purposive sampling

**Subjects and Selection Method:** After obtaining ethical clearance, patients of all age groups, who attended the orthopaedics OPD between July- August 2018, were consecutively included in our study.

**Exclusion Criteria:** Critically ill patients, patients refusing to give consent.

**Procedure and Methodology:** For each patient, relevant history was taken, clinical examination was done and appropriate investigations were advised to reach to a diagnosis. Using a pre-designed, semi-structured proforma, data pertaining to the socio-demographic characteristics such as age, gender, residence, education, etc. was obtained.

**Statistical Analysis**: Data thus generated was analyzed using SPSS version 20 and presented with suitable tables.

## III. Results

A total of 360 patients attended the orthopaedic OPD of IQ City Medical College & NM Hospital between July 2018 and August 2018.The majority of patients belonged to the age group of 46-60 years (n= 116, 32.2%). The mean age of the patients was 44.78±17.09.years. Male patients (n= 188, 52.2%) outnumbered females (n= 172, 47.8%). Maximum patients were of Hindu religion (n= 300, 83.3%). Majority of the patients belonged to general caste (n= 274, 66.7%), while some to Other Backward Caste (n=68, 18.9%) and Scheduled Caste/Scheduled Tribe category (n=48, 13.4%). Only 6.7% (n= 24) subjects were illiterate, while majority (n= 208, 57.8% ) had schooling for more than 10 years. 51.1% (n= 184) were from rural area and 48.9% (n= 176) were from urban area.(Table 1)

**Table 1:** Socio-demographic characteristics of study subjects:

| Variable | Frequency(%age ) |
|---|---|
| *Age* | |
| ≤15 | 16(4.4) |
| 16-30 | 60(16.7) |
| 31-45 | 104(28.9) |
| 46-60 | 116(32.2) |
| 61-75 | 48(13.4) |
| 76-90 | 16(4.4) |
| *Sex* | |
| Male | 188(52.2) |
| Female | 172(47.8) |
| *Religion* | |
| Hindu | 300(83.3) |
| Muslim | 60(16.7) |
| *Caste category* | |
| General | 244(67.8) |
| Other backward caste | 68(18.9) |
| SC/ST | 48(13.3) |
| *Area of residence* | |
| Rural | 184(51.1) |
| Urban | 176(48.9) |
| *Education level* | |
| Illiterate | 24(6.6) |
| Less than 10 years of schooling | 208(57.8) |
| More than 10 years of schooling | 128(35.6) |

Out of the 360 patients, 160 (44.4%) were new cases while rest were follow up cases (Table 2).

**Table 2:** Distribution of study subjects whether follow up or new or follow up case

| Type of case | Frequency (%age) |
|---|---|
| New Case | 160(44.4) |
| Follow up Case | 200(55.6) |
| Total | 360(100) |

The duration of the presenting complains was less than one month in 31.1% patients (n= 112) , while it was between one to six months for 38.9% patients (n= 140) and the rest 30%patients(n= 108) had their complains for more than 6 months (Table 3).

**Table 3:** Distribution of study subjects as per duration of symptoms

| Duration of symptoms | Frequency (%age) |
|---|---|
| Less than 1 month | 112(31.1) |
| 1-6 months | 140(38.9) |
| More than 6 months | 108(30) |

Only 18% (n= 65) patients had a history of trauma while 82% (n= 295) of the cases were of non traumatic origin (Table 4) .

**Table 4:** Distribution of study subjects whether traumatic or non traumatic cases

| **Type of case** | **Frequency(%age)** |
|---|---|
| Traumatic | 65(18) |
| Non traumatic | 295(82) |
| Total | 360(100) |

The age group between 31-45 years (30.8%) was the most affected by trauma (Table 5).

**Table 5:** Age Wise Distribution of Trauma Patients

| Age group | Frequency (%age) |
|---|---|
| ≤15 | 5(7.7) |
| 16-30 | 10(15.4) |
| 31-45 | 20(30.8) |
| 46-60 | 10(15.4) |
| 61-75 | 15(23) |
| 76-90 | 5(7.7) |
| Total | 65 (100) |

More males (67.7%) were affected by trauma than females (32.3%) (Table 6).

**Table 6:** Gender Distribution of Trauma Patients

| Gender | Frequency(%age) |
|---|---|
| Male | 44(67.7%) |
| Female | 21(32.3%) |
| Total | 65(100%) |

The distribution of various conditions has been depicted in Table 7.

**Table 7:** Distribution of cases

| Type of case | Frequency(%age) |
|---|---|
| Infections | 16(4.5) |
| Osteoarthritis | 68(18.9) |
| Knee Synovitis | 24(6.7) |
| Low Back Ache | 60(16.7) |
| Cervical Spondylosis | 24(6.7) |
| Clubfoot | 6(1.7) |
| Scoliosis | 2 (0.5) |
| Frozen Shoulder | 12(3.3) |
| Fractures | 30(8.3) |
| Ankle sprain | 17(4.7) |
| Wrist pain and Swelling | 10(2.8) |
| Polyarthralgia | 20(5.6) |
| Shoulder dislocation | 2(0.5) |
| Recurrent Shoulder Dislocation | 3(0.8) |
| Tennis Elbow | 20(5.6) |
| Trigger Finger | 6(1.7) |

| | |
|---|---|
| Acute Backache | 20(5.6) |
| Hip joint Pain | 4(1.1) |
| Gout | 8(2.2) |
| De Quervain's Tenosynovitis | 4(1.1) |
| Bone tumours | 4(1.1) |
| Total | 360(100) |

## IV. Discussion

The morbidity pattern of patients coming to the orthopaedic OPD of any tertiary care setup differs in different regions depending on the prevailing environmental and demographic conditions. We have conducted the study to look into the variables affecting the patients attending our orthopaedic OPD. We included a total of 360 patients attending the orthopaedic OPD of IQ City Medical College and NM Hospital, Durgapur for a duration of two months i.e. between July – August 2018. The data was collected in a prescribed format with due consent of the patients and was analysed at the end of the study period.

Out of the 360 patients, majority (61.1%) belonged to the working age group i.e. between 30-60 years of age while numbers of patients less than 15 years (4.4%) and more than 76 years (4.4%) were the least. Males (52.2%) outnumbered the females (47.8%) with respect to the total number of patients attending the orthopaedic OPD. This might be due to the fact that the male population is involved in various outdoor activities and are mainly affected by orthopaedic ailments.[1] Majority of them were Hindus (83.3%) by religion and belonged to the general caste (67.8%), depicting the demography of the draining area. The number of patients from rural (51.1%) and urban areas (48.9%) were almost equal which hinted towards extensive awareness and outreach of the health set up in the area. Although majority of them were literate (93.4%), but the percentage of patients with higher education was only 35.6% and only 6.6% of them were illiterates showing the education status of the given population.

44.4% of our study subjects were new cases while 55.6% of them comprised of follow up patients. Similar finding has been observed by Gani et al.[3] Our study also revealed that the orthopaedic symptoms are usually long standing as 68.9% of the patients had their symptoms for more than one month duration which was similar to findings of various studies.[3,5]

The majority of the patients attending orthopaedic OPD do not have a history of trauma , as traumatic cases form an emergency are mostly attended to at the casualty or emergency department. We also had only 18% of the patients giving history of trauma. Further it was observed that about half of the of the trauma patients (46.2%) belonged to the 31-60 years age group and were mostly males ((67.7%).[3,6]

Degenerative diseases like Osteoarthritis (18.9%), Low back ache(16.7%) and Cervical spondylosis (6.7%) formed the bulk of the patients attending the OPDs. A study conducted by Shankar PR et al also showed that spine problem was the major cause for attendance in orthopaedics OPD.[7]

## V. Limitations

Our study had its limitations as it was conducted in a single center on a small sample size in a very small time period so the results though indicative cannot be applied in general to the population of the area as a whole. Further long-term multicentre studies involving a large population is needed to get a clearer picture of the problem in hand and formulate health plans accordingly.

## VI. Conclusions

The patients coming to the orthopaedic OPDs are mostly of working age group and suffer from long standing pain and disability of non traumatic origin. Problems involving the vertebral coloumn are the commonest and knee problems come 2nd in the list.

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Ethical Clearance: The study was approved by the ethical committee of our institution.

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