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STUDY OF ORTHOPEDIC MORBIDITIES AMONG OUTDOOR PATIENTS IN A MEDICAL COLLEGE IN DISTRICT AMBEDKARNAGAR, INDIA

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ABSTRACT

Introduction: Congenital bone diseases, nutritional disorders like rickets, infective or metabolic conditions and trauma of bones and joints are most common orthopedic problems encountered among outdoor patients. This study was conducted to find out the prevalence of different orthopedic morbidities amongst outdoor patients of the Department of Orthopedics, Government Medical College, and District Ambedkarnagar.

Material and Methods: These six months, observational, outdoor department study was carried out in Department of Orthopedics, Government Medical College, Ambedkarnagar, India. A total of 1000 individuals gave their consent and participated in the study. A structured, pretested schedule was used to collect the data on the demographic characteristics (age, gender, religion) and orthopedic problems. The data was analyzed using SPSS software.

Results: A higher proportion of the outdoor patients was aged between 16-60 years (82.6%) and was females (50.1%). A higher percentage of orthopedic problems encountered were regional conditions of limbs (23.7%), followed by traumatic (23.0%) and degenerative (22.7%).Traumatic causes and neuromuscular disorders were more common among the males while degenerative, regional and rheumatic conditions were more common among the females.

Conclusion: Larger nationwide community based studies are required to know the extent of the orthopedic problems and formulate better health policies.

Keywords: Orthopedic morbidities, outdoor patients

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INTRODUCTION

Congenital bone diseases, nutritional disorders like rickets, infective or metabolic conditions and trauma of bones and joints are most common orthopedic problems encountered among outdoor patients. It may be a useful endeavour to know the demographic, racial, environmental and socio-economic factors in such patients with bone and joint disorders before suggesting and implementing suitable preventive measures. We need to create a systematic and scientific health data base to know the burden of musculoskeletal disease. This will help in deciding goals of the health need of country so that minimum basic orthopaedic care to whole population can be planned and the burden of patients in tertiary care hospitals can be reduced. Low back pain is a leading cause of disability. It occurs in similar proportions in all cultures, interferes with quality of life and work performance, and is the most common reason for medical consultations. Few cases of back pain are due to specific causes; most cases are non-specific.[1] Long bone fractures (femur and tibia) are the most common, non-fatal orthopaedic injuries accounting

for over 15% of hospital admissions.[2] With timely and effective treatment of these injuries, a patient could expect a favourable recovery with minimal disability, as is seen and expected in highincome countries. However, scarce resources within the low- and middle-income countries health systems leave many injured patients untreated or inadequately treated causing significant long-term disability. With this background the present study was undertaken to find out the prevalence of different orthopedic morbidities amongst outdoor patients of the Department of Orthopedics, Government Medical College, District Ambedkarnagar.

MATERIAL AND METHODS

The Study Design and the Participants

This six months, observational study was carried out amongst patients who attended the outdoor department of the Department of Orthopedics, Government Medical College, Ambedkarnagar, India. This hospital caters to a huge rural population of Ambedkarnagar district. Demographically, the population which resides in the villages of Ambedkarnagar district, have people of different religions, socioeconomic statuses and other different characteristics.

Data Collection

This study was conducted between 1st October 2014 and 31st March 2015. A total of 1000 individuals (499 males, 501 females) gave their consent and participated in the study. A structured, pretested schedule was used to collect the data with regards to the demographic characteristics (age, gender, religion) and orthopedic problems.

Ethical Committee Approval

An ethical approval for the study was obtained from the institutional ethical committee.

Data management and Statistical Analysis

The data entry and the statistical analysis were performed by using Microsoft Excel and the Statistical Package of Social Sciences (SPSS), Windows version 14.0 software.

RESULTS

Demographic profile of patients:

Out of the 1000 patients, 79 (7.9%) were aged between 0-15 years, 342 (34.2%) were aged between 31-45 years, 291 (29.1%) were between 16-30 years, 193(19.3%) were between 46-60 years, 95(9.5%) were above 60 years and. There were 501 females (50.1%) and 499 males (49.9%).

Table 1: Distribution of patients according to orthopedic problems

Variables	No.	%
Congenital	1	0.1
Traumatic and sequel of trauma	230	23.0
Infective	5	.5
Degenerative	227	22.7
Regional Condition of Limbs	237	23.7
Regional Condition of Spine and Neck	190	19.0
Rheumatic	74	7.4
Neuromuscular Disorder	27	2.7
Metabolic	2	.2
Bone Neoplasm	1	.1
Others	6	.6
Total	1000	100.0%

A higher percentage of orthopedic problems encountered were regional conditions of limbs (23.7%), followed by traumatic (23.0%) and degenerative (22.7%).

Table 2: Gender wise distribution of patients with orthopedic problems

Orthopedic problems	Male	Female	Total %
Congenital	0 (.0%)	1(100.0%)	1 (100.0%)
Traumatic and sequel of trauma	149 (64.8%)	81 (35.2%)	230 (100.0%)
Infective	2(40.0%)	3(60.0%)	5 (100.0%)
Degenerative	105 (46.3%)	122(53.7%)	227 (100.0%)
Regional Condition of Limbs	118 (49.8%)	119(50.2%)	237 (100.0%)
Regional Condition Of Neck and Spine	77(40.5%)	113(59.5%)	190 (100.0%)
Rheumatic	24(32.4%)	50(67.6%)	74 (100.0%)
Neuromuscular Disorder	17(63.0%)	10(37.0%)	27 (100.0%)
Metabolic	1(50.0%)	1(50.0%)	2 (100.0%)
Bone Neoplasm	1(100.0%)	0(0.0%)	1 (100.0%)
Others	5(83.3%)	1(16.7%)	6 (100.0%)
Total	499(100%)	501(100%)	1000 (100%)

Traumatic causes and neuromuscular disorders were more common among the males while degenerative,

regional conditions of spine, limbs and neck and rheumatic conditions were more common among the females.

Table 3: Age wise distribution of patients with orthopedic problems

Orthopedic problems	Age (years)					
	0-15	16-30	31-45	46-60	61 and above	Total
Congenital	1(100 .0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (100.0%)
Traumatic and sequel of trauma	41(17.8%)	76 (33.0%)	73(31.7%)	26(11.3%)	14 (6.1%)	230 (100.0%)
Infective	1(20.0%)	3 (60.0%)	1(2.1%)	0(20.0%)	0(0.0%)	5 (100.0%)
Degenerative	1(0.4%)	8 (3.5%)	92(40.5%)	66(29.1%)	60 26.4%)	227 (100.0%)
Regional Condition Limbs	19 (8.0%)	90(38.0%)	63(26.6%)	52(21.9%)	13 (5.5%)	237 (100.0%)
Regional Condition Neck &Spine	7 (3.7%)	80 (42.1%)	81(42.6%)	20(10.5%)	2 (1.1%)	190 (100.0%)
Rheumatic	4 (5.4%)	20 (27.0%)	25(33.8%)	24(32.4%)	1 (1.4%)	74 (100.0%)
Neuromuscular Disorder	2 (7.4%)	11 (40.7%)	6(22.2%)	5(18.5%)	3 (11.1%)	27 (100.0%)
Metabolic	1 (50.0%)	0 (0.0%)	0(0.0%)	0(0.0%)	1 (50.0%)	2 (100.0%)
Bone Neoplasm	0 (0.0%)	0 (0.0%)	1(100.0%)	0(0.0%)	0 (0.0%)	1 (100.0%)
Others	2 (0.0%)	3 (0.0%)	0(4.3%)	0(0.0%)	1 (16.6%)	6 (100.0%)
Total	79 (7.9%)	291 (29.1%)	342 (34.2%)	193 (19.3%)	95 (9.5%)	1000 (100.0%)

Majority of orthopedic problems were seen among those aged between 16-60 years of age.

DISCUSSION

A higher proportion of the orthopedic patients were aged between 16-60 years (82.6%) and were females (50.1%). A higher percentage of orthopedic problems encountered were regional conditions of limbs (23.7%), followed by traumatic (23.0%) and degenerative(22.7%).Backache (62%) and osteoarthritis (51.6%) were common orthopedic problems reported in a study by Avachat et al in rural Maharashtra among postmenopausal females.[3] In a study conducted by Agarwal et al (2013) in Shillong among children, majority of the cases trauma was the major cause (51.6%) for bringing the child to the medical center.[4] Traumatic causes were more common among the males in this study. Recent studies in different parts of India have also reported male preponderance.[5-8] This can be attributed to their greater involvement in outdoor activities as compared to females. What has less frequently been reported is that these males are often the sole breadwinners for a family of dependents. In a study in Uganda by O'Hara et al (2014)[9], 74% male patients with orthopedic trauma were the main breadwinner for their household supporting an average of 5.7 dependents. The number of trauma cases were highest among the age group of 16-30 years followed by 31-45 years in this study which is similar to a study conducted in Delhi where the number of injuries were highest among the age group of 5-25 years (48%) followed by 25-45 age group (28%).[10] In a study in Germany on accidents in pre-school children, it was found that boys had 33% more accidents than girls, about 3/4th of all accidents took place in home or in its direct environment and the following accidents occurred particularly often- fall from stairs, fall from playground equipments, fall from bicycle and high bed.[11] In a study done to evaluate childhood injuries in rural north India, it was found that children in the age group of 0-14 y accounted for 30% of all injury cases of which 42% were injured at home, 35% on roads, 8% in farms. The maximum number of injuries was due to fall (35%).[12] Trauma suffered was mainly during outdoor playing especially involving the upper limbs and was more common in boys than girls in the study by Agarwal et al.[4] Traumatic injuries were found to not only have a substantial impact on the patient but also on their family and friends. 83% of the patients in the study by O'Hara et al were working at the time of injury, often supporting a spouse, children and siblings. Following the injury, which rendered most patients unable to work, many patients were unable to pay the school fees of their children. Improved mechanisms to fund the management of treating trauma patients (government funding, availability of loans, access to insurance) would potentially alleviate the present reliance of patients on their

friends, family, and hospital connections, and diminish the economic burden that falls on the patient and their dependents.[9] Degenerative, regional conditions of limbs and spine and rheumatic conditions were more common among the females. Females are found to have more severe osteoarthritis and involvement of knee joint is more common.[13] RA is one of the many chronic inflammatory diseases that predominate in females. The prevalence is about 2.5 times higher in females than males.[14] Majority of rheumatic cases were seen in the age group 41-50 years in this study. Similar trend was observed by Alam et al in a tertiary hospital of Pakistan.[15] The age of onset of RA is most frequent during fourth and sixth decade of life.[14] The study limitations are that we did not find out the association with other factors such as socioeconomic status and occupation. Larger nationwide community based studies are required to know the extent of the orthopedic problems and their economic burden to formulate better health policies in our country.

REFERENCES

1.George E. Ehrlich. Low back pain.Bulletin of the World Health Organization 2003;81:671-676.
2.Mock C, Cherian MN . The global burden of musculoskeletal injuries: challenges and solutions. Clin Orthop Relat Res 2008; 466(10): 2306-2316.
3.Avachat SS, Deshpande SB, Zambare MB, Phalke DB. Study of Orthopedic Morbidities Among Postmenopausal Women in a Medical College Hospital in Rural Area of Western Maharashtra, India. Indian Journal of Clinical Practice 2013; 24(6): 574-77.
4.Agarwal S. Prospective Hospital Based Study of Childhood Orthopaedic Problems - A Case Series. Journal of Clinical and Diagnostic Research. 2014, 8(12): 1-3.
5.Swarnkar M, Singh P, Dwivedi S. Pattern of trauma in central India – An epidemiological study with special reference to mode of injury. Int J Epidemiol 2010;9:1.
6.Meena RK, Singh AM, Singh CA, Chishti S, Kumar AG, Langshon R. Pattern of fractures and dislocations in a tertiary hospital in North East India. Int J Epidemiol 2013;11:13–5.
7.Gulati D, Nat A, Kumar S, Agarwal A. Skeletal injuries following unintentional fall from height. Turk J Trauma Emerg Surg 2012;18:141–6.
8.Awasthi B, Raina SK, Kumar N, Sharma V. Sociodemographic determinants of traumatic musculoskeletal injuries: A register-based study from North-west India. Int J Health Allied Sci 2015;4:54-7.
9.O'Hara NN, Mugarura R, Slobogean GP, Bouchard M. The Orthopaedic Trauma Patient Experience: A Qualitative Case Study of Orthopaedic Trauma Patients in Uganda. PLoS ONE 2014; 9(10): 1-6
10.Verma PK, Tewari KN. Injury Prevention and Control. WHO Project No. ICP DPR 001. WHO; 2003. p. 1–13.
11.Kersting-Durrwachter G, Mielck A. Accidents in preschool children in the Boblingen district-accident causes and risk group. Gesundheitswesen. 2001;63(5):335-42.
12.Mohan D, Kumar A, Varghese M. Childhood injuries in rural north India. Int J Inj Cintr Saf Promot. 2010;17(1):45-52.
13.Felson DT. The epidemiology of knee osteoarthritis: results from the Framingham Osteoarthritis Study. Semin Arthritis Rheum 1990;20(3 Suppl 1):42-50
14.Goronzy J, Cornelia M. Rheumatoid arthritis epidemiology, pathology and pathogenesis. In: Klippel JH, Wehand CM, Wortmann RL, ed. Primer on the rheumatic disease 11th ed. Georgia: William M, 1997; pp 155-74
15.Alam SM, Kidwai AA, Jafri SR, Qureshi BM, Sami A, Qureshi HH, et al. Epidemiology of rheumatoid arthritis in a tertiary care unit, Karachi, Pakistan. J Pak Med Assoc 2011; 61:123-6.

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