



# ASSESSMENT OF PRESCRIPTION TRENDS IN ORTHOPEDICS DEPARTMENT

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## ABSTRACT

**Introduction:** In orthopedics department of any health care hospital use of multiple drugs is necessary due to clinical conditions like fracture, spondylosis, and other conditions associated with severe pain. Use of different categories of medicines include, analgesic for relieving pain, antipyretics for elevated body temperature, antimicrobials for preventing infection, muscle relaxants, immunosuppressants, vitamin supplements etc. **Materials and Methods:** The study is designed to be a retrospective study which does not involve a direct interaction with the patients. The patient's clinical data of the complete hospital stay were collected from the Medical Records Department of the hospital after getting approval for the study by the hospital's Institutional Ethics Committee. **Results and Discussion:** The study was carried out in about 300 patient's clinical data, the frequency of admissions with respect of clinical conditions which included fracture, lumbar spondylosis, osteoarthritis, cervical spondylosis, bursitis, synovitis, joint dislocation were noted. Various trends of drugs like NSAIDS, anti-inflammatory drugs, muscle relaxants, and antimicrobials are noted done. All the data collected and analysed are reported in TABLE 1 and TABLE 2. About 153 patients were admitted with fracture, lumbar spondylosis cases were 54, osteoarthritis were of 45, cervical spondylosis were 3, bursitis were 30, synovitis were 6, joint dislocation were of 9 cases. **Conclusion:** It can be concluded from the study that the flow of patients with fracture as chief complaint were of more in number accounting with 51% of overall study population. NSAIDS were found to be more frequently prescribed with 43% of overall study population. It was also observed that the prescription pattern was in adherence with the hospital formulary to large extent.

**Keywords :-** orthopedics, muscle relaxants, fracture, hospital formulary.

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## INTRODUCTION

In orthopedics department of any health care hospital use of multiple drugs is necessary due to clinical conditions like fracture, spondylosis, and other conditions associated with severe pain[1,2]. Use of different categories of medicines include, analgesic for relieving pain, antipyretics for elevated body temperature, antimicrobials for preventing infection, muscle relaxants,

immunosuppressants, vitamin supplements etc[3-7]. Polypharmacy is defined as use of more than one drug, which may result in non-compliance by the patients, increased risk of side effects, adverse effects and adverse events[8,9]. Thus, to evaluate the rational use of medicines, drug utilization is designed to be carried out the department of orthopedics in Katuri Medical College

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& Hospital, thereby, any intervention required can be guided to the hospital management for better therapeutic approach of the patients[10].

#### AIMS AND OBJECTIVES:

- To analyse the different classes of drugs prescribed in the orthopedics department of the study hospital.
- To assess the dose and dosage forms used in the orthopedics department.
- To assess the rationality of drug use by the physicians.
- To evaluate the patient compliance in orthopedics

department of the study hospital.

#### MATERIALS AND METHODS:

The study is designed to be a retrospective study which does not involve a direct interaction with the patients. The patient's clinical data of the complete hospital stay were collected from the Medical Records Department of the hospital after getting approval for the study by the hospital's Institutional Ethics Committee. Individual patient's data are collected and incorporated into statistical analytical tool for assessing data. About 300 prescriptions of the in-patient data were collected and assessed.

**Table 1: Frequency of admissions with respect to clinical conditions**

Clinical Condition	Frequency (N)	Percentage (%)
Fracture	153	51
Lumbar spondylosis	54	18
Osteoarthritis	45	15
Cervical spondylosis	3	1
Bursitis	30	10
Synovitis	6	2
Joint dislocation	9	3

**Table 2: Pattern of drug class prescribed in orthopedics department**

Class of drug	Frequency	Percentage
NSAIDs	129	43
Antimicrobials	78	26
Muscle relaxants	30	10
Anti-inflammatory enzymes	63	21

#### RESULTS AND DISCUSSION:

The study was carried out in about 300 patient's clinical data, the frequency of admissions with respect of clinical conditions which included fracture, lumbar spondylosis, osteoarthritis, cervical spondylosis, bursitis, synovitis, joint dislocation were noted. Various trends of drugs like NSAIDs, anti-inflammatory drugs, muscle relaxants, and antimicrobials are noted done. All the data collected and analysed are reported in TABLE 1 and TABLE 2.

About 153 patients were admitted with fracture, lumbar spondylosis cases were 54, osteoarthritis were of 45, cervical spondylosis were 3, bursitis were 30, synovitis were 6, joint dislocation were of 9 cases.

Various pattern of class of drug in respect to their frequencies were 129 of NSAIDs, 78 cases with antimicrobials, muscle relaxants were 30, anti-inflammatory were 63.

#### CONCLUSION:

It can be concluded from the study that the flow of patients with fracture as chief complaint were of more in number accounting with 51% of overall study population. NSAIDs were found to be more frequently prescribed with 43% of overall study population. It was also observed that the prescription pattern was in adherence with the hospital formulary to large extent.

#### REFERENCES

1. CW Stratton, H Ratner, PE Johnston, W Schaffner: Focused microbiological surveillance by specific hospital unit: practical application and clinical utility.
2. Brunton LL, Chabner BA, Knollman BC. Goodman & Gilman's The Pharmacological Basis of Therapeutics. 12th Edition. New York: McGraw-Hill Companies Inc.; 2011: 501, 508, 992.
3. Shankar PR, Pai R, Dubey AK, Upadhyay DK. Prescribing patterns in the orthopaedics outpatient department in a teaching hospital in Pokhara, western Nepal. Kathmandu Univ Med J (KUMJ). 2007;5(1):16-21.
4. Rani MA. Utilization pattern of nonsteroidal anti-inflammatory drugs (NSAIDs) in orthopaedic practice at a tertiary care hospital in eastern Nepal. J Nep Med Assoc 2000; 39: 315-318.

5. Lesar TS, Briceland LL. Survey of antibiotic control policies in university-affiliated teaching institutions. *Ann Pharmacother* 1996;30:31-4.
6. Bithi SS Khan MR, Khan AU. Drug utilization study in orthopaedic units antibiotics prescribed in hospital out-patients in Dhaka, Bangladesh. *International current pharmaceutical journal*, aug. 2014 3(9): 318-321.
7. Tanzer, M., J. Miller, and G. K. Richards. 1994. Preoperative assessment of skin colonization and antibiotic effectiveness in total knee arthroplasty. *Clin. Orthop. Relat. Res.* 299:163–168.
8. Korinek AM. Risk factors for neurosurgical site infections after craniotomy: a prospective multicenter study of 2944 patients. *Neurosurgery* 1997; 41:1073-1081.
9. Pories S, Gamelli R, Mead P, Goodwin G, Harris F, Vacek P. The epidemiologic features of nosocomial infections in patients with trauma. *Arch Surg* 1991; 126:97-99.
10. Raymond D, Pelletier S, Crabtree T, Evans H, Pruetter T, Sawyer R. Impact of antibiotic-resistant gram negative bacilli infections on outcome in hospitalised patients. *Crit Care Med* 2003; 31:1035-1041.



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