

## Original Article

# The frequency of NSAIDs Use in orthopedic patients in tertiary hospital

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## ABSTRACT

**Objective:** In this study our main goal is to identify the frequency of NSAIDs use in orthopedic patients. **Method:** This cross-sectional study was carried out at tertiary care hospital, in the department of orthopedics. Where data were collected from January 2019 to January 2020.

During the study, a total of 100 patients of orthopedic department who have used or will be using NSAIDs for more than a week were include. Sample were collected through purposive sampling as per inclusion criteria. **Results:** During the study, most of the patients were belong to 47-57 years. 30.8% and majority were male. Arthritis was the most common indication for NSAIDs (42%) followed by Knee arthritis 29% and Spinal diseases 13%. Majority cases 45% prescribed to Aceclofenac followed by Lornoxicam cases were 25%, 15% were Diclofenac, 10% were Etoricoxib. During discharge 60% patients prescribed with Proton pump inhibitors (PPIs).

**Conclusion:** NSAIDs were the frequently prescribed drugs in the orthopedic OPD where Aceclofenac mostly prescribed. Most of the cases to avoid GI tract conditions PPI were prescribed during discharge.

**Keywords:** non-steroidal anti-inflammatory drugs (NSAIDs), orthopedics, Proton pump inhibitors (PPIs).

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## INTRODUCTION

Drug usage is the marketing, distribution, prescription, and use of drugs in society with a focus on the resulting medical and social implications. OTC medicines such as non-steroidal anti-inflammatory drugs (NSAIDs) are widely used to treat pain and inflammation. Prescriptions for NSAIDs

are routinely written all over the world, with the United States alone filling more than 70 million per year. Some studies indicate that between 5 and 10 percent of American people frequently take NSAIDs. OTC NSAIDs account for more than 30

billion dollars in annual sales in the United States.<sup>1-3</sup>

These medicines, which act by interfering with cyclooxygenase (COX) pathway and preventing arachidonic acid from being converted to prostaglandins, are among the most commonly prescribed in the world.<sup>4</sup> With so many NSAIDs on the market today, it might be difficult to choose just one NSAID based on logic alone, but rather on empiricism. Rheumatoid arthritis (RA), osteoarthritis (OA), and low back pain are common indications for the use of NSAIDs (LBP). As per the previous study conducted, the pattern of the study shows that the frequently used non-selective NSAIDs were Aceclofenac, Diclofenac, non-selective COX inhibitors, were mostly prescribed.<sup>5</sup>

In this study our main goal is to identify the frequency of NSAIDs in orthopedic patients.

#### METHODS AND MATERIALS

This cross-sectional type study was carried out at tertiary care hospital, in the department of orthopedics. Where data were collected from January 2019 to January 2020.

During the study, a total of 100 patients of orthopedic department who have used

or will be using NSAIDs for more than a week were include. Sample were collected through purposive sampling as per inclusion criteria.

All collected data were coding and input in SPSS-25 for further analysis. Both descriptive and inferential statistics done. Descriptive statistics included frequency distribution, percent, mean, standard deviation; graph, tables, figures and inferential statistics.

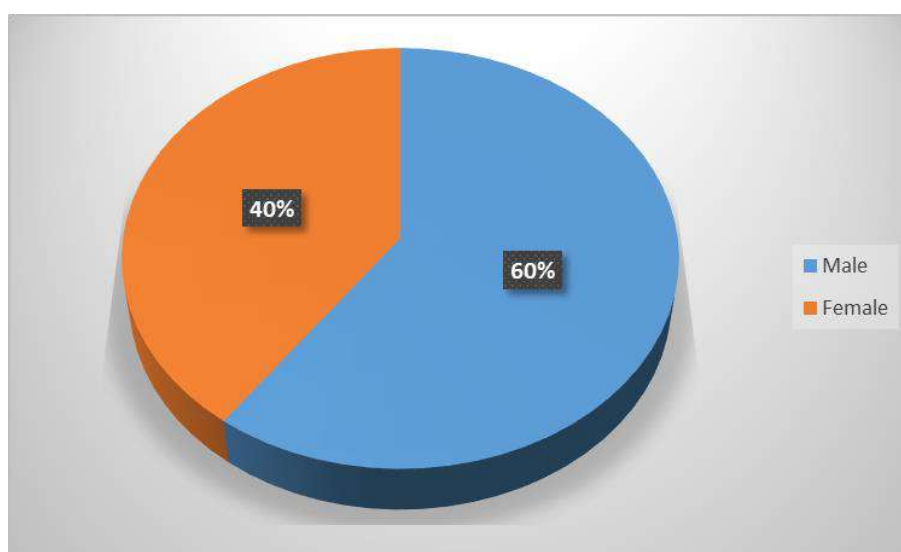
#### RESULTS

In Table-I shows age distribution of the study group where most of the patients were belong to 47-57 years. 30.8%. Mean  $\pm$  SD of the age was **48 $\pm$ 12.90** years. The following table is given below in detail:

**Table-I: Age distribution of the study group**

Age group	Percent
25-35 years	23.1
36-46 years	19.2
47-57 years	30.8
58-68years	19.2
>68years	7.7
<b>Total</b>	<b>100</b>

In figure-1 shows gender distribution of the patients where male percentage were higher than female. The following figure is given below in detail:



**Figure-1: Gender distribution of the patients.**

In Table-II shows clinical diagnosis of the patients where arthritis was the most common indication for NSAIDs (42%)

followed by Knee arthritis 29% and Spinal diseases 13%. The following table is given below in detail:

**Table-II: Clinical diagnosis of the patients**

Clinical diagnosis	n	%
<b>Arthritis</b>	42	42
<b>Knee arthritis</b>	29	29
<b>Spinal diseases</b>	13	13
<b>Rheumatoid arthritis</b>	10	10
<b>Fractures</b>	3	3
<b>Spondylitis</b>	2	2
<b>Femur fracture</b>	1	1

In Table-III shows prescribed NSAIDs to patients during admission where majority cases 45% prescribed to Aceclofenac followed by Lornoxicam cases were 25%,

15% were Diclofenac, 10% were Etoricoxib. The following table is given below in detail:

**Table-III: Prescribed NSAIDs to patients during admission**

Prescribed NSAIDs	n	%
<b>Aceclofenac</b>	45	45%
<b>Lornoxicam</b>	25	25
<b>Diclofenac</b>	15	15%
<b>Etoricoxib</b>	10	10%
<b>Aspirin</b>	3	3%
<b>Ibuprofen</b>	2	2%

In Table-IV shows duration of hospital stay and current prescribed medicine to the patients where most of the patients stayed

for hospital 7-10 days, 60% and 60% cases prescribed proton pump inhibitors. The following table is given below in detail:

**Table-IV: Duration of hospital stay and current prescribed medicine to the patients**

Duration of hospital stay	%
<b>3 Days</b>	10%
<b>5 days</b>	30%
<b>7-10 days</b>	60%
<b>Current prescribed medicine</b>	<b>%</b>
<b>Proton pump inhibitors (PPIs)</b>	<b>60%</b>
<b>Antibiotic</b>	10%
<b>Multivitamins</b>	20%
<b>Muscle Relaxant</b>	10%

## DISCUSSION

The patients of the 47-57 years age group were found in higher frequency, 30.8% in this study. As with middle age, the human

body to respond and tore differently with acute and chronic injuries. Arthritis (67%) was the most common cause of

taking NSAIDs followed by spinal disease (9%) in the one study. <sup>6</sup>Whereas it was similar findings were noted in our study where arthritis was the most common indication for NSAIDs (42%) followed by Knee arthritis 29% and Spinal diseases 13%.

In this study, the most commonly prescribed NSAIDs were Aceclofenac. Where as in another study its consumption was 73.3%.

In a study conducted in OPD in Teaching Hospital in Pokhara the most prescribed NSAIDS was Diclofenac (21.3%). <sup>7</sup> The use of Aceclofenac over Diclofenac might have come because Aceclofenac was found more superior to Diclofenac in terms of epigastric discomfort, dyspepsia, abdominal, and also, compliance was better with Aceclofenac

Proton pump inhibitors (PPIs) were the most commonly used concurrent medications in our study. PPIs provided potent and long durable inhibitors of gastric acid secretion and had irritating ability in healing NSAIDs related ulcers.

This varied in days might be associated with recommended days for different cases varies.

## CONCLUSION

NSAIDs were the frequently prescribed drugs in the orthopedic OPD where Aceclofenac mostly prescribed. Most of the cases to avoid GI tract conditions PPI were prescribed during discharge.

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