

# NSAIDs pattern of use in Nasiriya City-South of Iraq

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## ABSTRACT

**Background:** NSAIDs are group of drugs that was used for their properties as analgesic, antipyretic and anti-inflammatory and this group was divided into 2 groups according to their selectivity towards enzyme called COX as this enzyme have two isomers and these two groups named selective and non-selective COXII inhibitors.

NSAIDs are include more than 20 agents that differs in their affinity toward this enzyme and thus differ in their analgesic, antipyretic, anti-inflammatory and adverse effects.<sup>1</sup>

**Aim:** Aim of this current study is to validate non-steroidal anti-inflammatory drugs (NSAIDs) pattern selection in Nasiriya city- South of Iraq.

**Method:** 82 physicians were asked about the Non-steroidal anti-inflammatory drugs they prescribe for their patients, the dose, dosage form, dose frequency, concomitant drugs (objective from administration of these drugs with NSAIDs) and adverse effect. The study period was extended from January 2019 till July 2019.

**Results:** The most prescribed NSAIDs was found Ibuprofen (32.9%) and Diclofenac sodium (28.1%) and the other NSAIDs including Mefenamic acid and others account for (39%) and in term the investigation of dosage form we found that the oral dosage form is the more dominant.

**Conclusion:** We find out, Ibuprofen and Diclofenac sodium is suitable for self-medication with regards to its relatively wide spectrum of indication, good tolerance and safety. Overall, it has been rated respectively as the most prescribed conventional NSAIDs.

**Keywords:** NSAIDs, Ibuprofen, diclofenac sodium, analgesic, anti-inflammatory.

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## INTRODUCTION

NSAIDs is large group that contain more than 20 approved agents that may lead to big question for the prescribers which agent will be more effective and more safe and which dosage form will be the best for patients in addition to presence more than one objective from administration of NSAIDs so also there are another question which objective is the best.<sup>2</sup>

The most prescribed NSAIDs was aspirin as it was account for more than 62% in the outpatient pharmacies of teaching university hospital in Nigeria they were made their study through investigations included 3800 prescriptions as this study was designed to find the pattern of NSAIDs prescription in Nigeria.<sup>3</sup>

Among 3140 orthopedic patients was studied in Korean hospital as they was received NSAIDs drugs as analgesic for their pain the results was shown that the celecoxib was take the big share from the prescription behavior and they found the most dominant indication for the administration was for arthritis as it was account for (67%) and regarding the adverse events that associated with using of NSAIDs the gastrointestinal adverse events it was the most dominant especially for the patients who use the NSAIDs for long period more than 3 months and for elderly patients and they recommend to made patients self-educational awareness program, physicians educational program, hospital programs to increase physicians attention toward the risks that associated with NSAIDs use.<sup>4</sup>

105 patients who was use NSAIDs and they have risks for developing gastrointestinal adverse effects was investigated by group of clinical pharmacists by using patient's questionnaire and risk scale score and they found more than 27% of patients belong to high risk or very high risk group and as recommendation they recommend the physicians need more understanding for each patients profile especially for risk factors for gastrointestinal adverse events.<sup>5</sup>

The most prescribed NSAIDs for 600 patients at outpatient department in 4 hospitals was diclofenac sodium and the

objectives of NSAIDs administration was distributed between inflammatory conditions, fever and orthopedic pain and they found the prescription behavior was deviated from (WHO) standard values and they recommend as there are need to review drug utilization practice.<sup>6</sup>

## SUBJECTS

82 patients who was used NSAIDs for their pain and inflammatory conditions management was investigated in this work to find out which agents was used more, which adverse event was occurred more frequently, which dosage form was preferred by prescribers, what is the main therapeutic objective of the physicians behind their prescription.

All these questions were investigated and answered through face to face meeting with physicians who was prescribe NSAIDs for their patients according to questionnaire was designed for this study.

## METHODS

The study period was continued for period from about 7 months during which there are many questionnaires was filled by physicians from different specialties who deal with pain and inflammatory conditions management like (Orthopedists, Surgeons, rheumatologists and Gynecologists) through face to face communication and then filling the questions of the questionnaire then the data was collected and analyzed through statistical program SPSS (statistical package for social sciences).

## RESULTS

The mostly prescribed NSAIDs according to this work was Ibuprofen (32.9%) then followed by Diclofenac sodium (28.1%) then followed by Mefenamic acid (15.9%) and all other NSAIDs was account for the remaining share.

Table 1: Show types of NSAIDs and patients

NSAIDs	No. of patients	%
Ibuprofen	27	32.9%
Diclofenac Na	23	28.1%
Mefenamic acid	13	15.9%
Other NSAIDs	19	23.1%
Total	82	100%

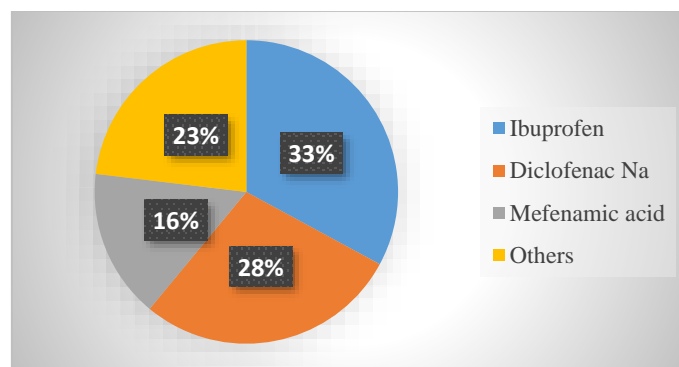


Figure 1: Show percentage of NSAIDs types.

Regarding the question of which dosage form was the mostly prescribed according to physician's feedback and the analysis of data was shown that the preferred dosage forms was the oral dosage form either (tablets or capsules) and there is low rate of injectable dosage form use.

For the main therapeutic objective of the NSAIDs administration was the analgesic effect (64.6%) was the main objectives of administration then followed by anti-inflammatory (22%) and then antipyretic (13.4%).

## DISCUSSION

Availability of more than one NSAIDs that need to be investigated in term of their safety, efficacy and therapeutic objectives of their administration in order to find the standard of selection whatever comply with WHO standard as there are some studies was find the practice of NSAIDs prescribing was partially deviated from the standard of WHO and some of these studies was recommend to increase the follow up on NSAIDs prescribing practice through establishing some agencies like drugs information center, drug bulletins and establishing drug and therapeutic committee.<sup>7</sup>

In this work Ibuprofen was the mostly prescribed with percent (32.9%) and there are studies when compare the safety of NSAIDs was found there are high safety level of Ibuprofen even prescribed alone or with other gastrointestinal protective drugs is safe on stomach and associated with high rate of prescription due to high rate of safety and dose flexibility.<sup>8</sup>

When the objectives of NSAIDs was investigated in this work the main objective of administration was the analgesic effect was the main objective of administration (64.6%) according to the physician's feedback as the NSAIDs was prescribed for their analgesic, anti-inflammatory and antipyretic and there

are many studies talk about the benefit from NSAIDs in athlete's injuries.<sup>9</sup>

## CONCLUSION

Availability many agents of NSAIDs with different manufacturing origin and dosage forms that may be differ in their effectiveness and safety patient preferences and need to be investigated and this issue not specific for NSAIDs as there are many researches targeted to investigate the efficacies of other pharmacological group like proton pump inhibitors that marketed for Iraqi pharmaceutical market.<sup>10</sup>

And as recommendation we need to be more comply with WHO instruction of NSAIDs administration and we need more tight follow up on OTCs habit of some NSAIDs through some pharmacies.

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