



KNOWLEDGE, ATTITUDE AND PRACTICES AMONG ELDERLY PATIENTS ABOUT THE USE AND SIDE EFFECTS OF NSAIDS

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ABSTRACT

Introduction: Non Steroidal Anti-inflammatory Drugs (NSAIDs) is a group of drugs that has anti-inflammatory and analgesic effects. There are several known adverse effects to which the elderly age group is more susceptible due to altered pharmacokinetics and increased likelihood of drug interactions as a result of polypharmacy. NSAIDs can be procured easily over the counter and it is important to ascertain the extent to which these drugs are consumed by patients according to their convenience. It is also vital to heighten awareness among patients and practitioners regarding the undesirable outcomes associated with frequent NSAID intake.

KEYWORDS : Nsaids, Elderly, Adverse Effects, Attitude

INTRODUCTION:

Non Steroidal Anti-inflammatory Drugs (NSAIDs) is a group of drugs that has anti-inflammatory and analgesic effects. This is brought about by their inhibition of cyclooxygenase enzyme which thereby inhibits the production of prostaglandins.¹ NSAIDs are frequently used for pain relief in both acute and chronic conditions such as arthritis, musculoskeletal pain, dysmenorrhoea, and headaches, to name a few.

There are several adverse effects associated with NSAID intake, such as dyspepsia, gastric mucosal erosions, chronic kidney disease, myocardial infarction and stroke.²

Physiological changes associated with aging result in altered pharmacokinetics which can lead to a higher frequency of side effects. As polypharmacy is a common phenomenon seen in the geriatric population, there is also an increased likelihood of adverse drug interactions.^{3,4}

Patients may purchase NSAIDs (e.g. Ibuprofen, Diclofenac, etc.) over the counter according to their convenience. Thus it is imperative that they be made aware of the potential risks associated with these drugs. Hence this study was conducted in a Tertiary Care Hospital in Sawangi (Meghe), Maharashtra to ascertain the knowledge, attitude and practices of elderly patients regarding NSAIDs and their side effects.

AIM:

To ascertain the Knowledge, Attitude and Practices among elderly patients about the use and side effects of NSAIDs

OBJECTIVES:

1. To assess patients' knowledge regarding NSAIDs and their side effects
2. To understand the attitude of elderly patients towards the use of NSAIDs
3. To observe the practices followed by the elderly population concerning NSAIDs

MATERIAL AND METHODOLOGY

STUDY SETTING:

study will be conducted in the opd of a Tertiary Care Hospital (AVBRH), Wardha, Maharashtra

STUDY DESIGN:

Descriptive Cross-sectional Study

STUDY PARTICIPANTS:

Study participants will be elderly patients above the age of 60 years, visiting AVBRH OPD from neighbouring localities.

INCLUSION CRITERIA:

Male and female patients above the age of 60 years with complaints of pain in the last 1 year.

EXCLUSION CRITERIA:

1. Patients not willing to participate in the study

SAMPLE SIZE:

The prevalence of NSAIDs prescription in global as well as Indian setting is 15%-40%

By prevalence sampling method

$$\begin{aligned} \text{Sample size} &= 4pq/L^2 \\ &= 4 \times 29 \times 71 / 9^2 \\ &= 101.6 \\ &= 100(\text{approx}) \end{aligned}$$

So, total sample size will be 100

SAMPLING PROCEDURE:

Patients above the age of 60 years coming to Out Patient Department for ailments such as lower back pain, generalized body ache with fever and localized pain will be selected for the study. The sample size will be collected by simple random method from the list of OPD patients.

DATA COLLECTION TOOL AND PROCESS:

The interview was conducted with a semi-structured questionnaire. The study used the following set of questions regarding NSAIDs: 1) Do you know what NSAIDs are? 2) Do you know that they have side effects? 3) Have you purchased NSAIDs over the counter in the last 1 year? If yes why? 4) When you visit the doctor, what form of treatment do you expect? 5) If you were aware of the side effects of NSAIDs would you still prefer to take them? (Why). The 2 scale answers of the first three questions and Q. no.5 include 1) Yes and 2) No. The patients were given the following options to select the answer for Q. no. 4: Oral NSAIDs Injectable NSAIDs Traditional methods/ home remedies Ayurvedic medication.

STUDY ANALYSIS PLAN:

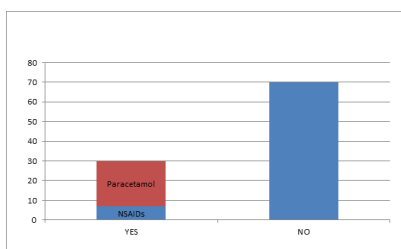
Data obtained will be entered in Microsoft excel sheets. Tabulation and Graphical presentation of data will be done

FINAL BUDGET / SOURCE OF FUNDING: None

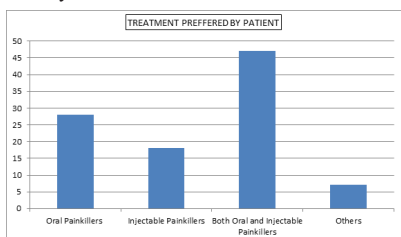
RESULTS

1. The graph shows age-wise distribution of patients. Out of all the participants in the study [n=100], 75 [75%] were in the age group 60 to 70 years, 24 [24%] were 70 to 80 years of age and 1 [1%] was more than 80 years of age.

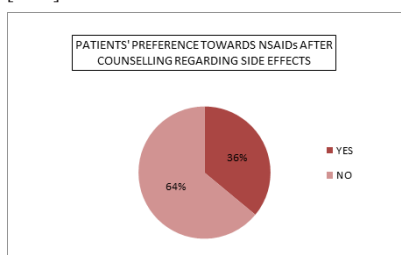
- Out of all the participants in the study [n=100], 36 [36%] were male and 64 [64%] were female.
- Out of all the participants in the study [n=100], 15 [15%] did not have any education, 41 [41%] were educated till the first grade, 29 [29%] up to high school and 4 [4%] had received education until higher secondary. 8 [8%] had finished undergraduate studies and 3 [3%] had postgraduate education.
- Out of all the participants in the study [n=100], 11 [11%] were unemployed, 59 [59%] were farmers or labourers, 4 [4%] worked as shopkeepers and 10 [10%] were housewives. 16 [16%] worked in other sectors such as engineering, teaching, and cooking.
- Out of all the participants in the study [n=100], 9% knew that there were side effects associated with painkillers and 91 [91%] did not.
- Out of all the participants in the study [n=100], 38 [38%] visited the hospital 0 to 2 times in the last one year for fever or pain, 37 [37%] went to the hospital 3-5 times and 21 [21%] went 6-10 times in one year. 4 [4%] went to the hospital more than 10 times in an year.
- Out of all the participants in the study [n=100], 57 [57%] went to the hospital with complaints of musculoskeletal pain, 38 [38%] with complaints of fever and generalised body ache, and 3 [3%] with local injury. 2 [2%] went for other complaints such as abdominal pain and post-op pain.
- Out of all the participants in the study [n=100], 30 [30%] purchased painkillers OTC and 70 [70%] did not in the last 1 year. Out of the 30 patients who purchased painkillers OTC, 23 [23%] stated they purchased Paracetamol and 7 [7%] purchased an NSAID.



- Out of all the participants in the study [n=100], 28 [28%] preferred oral NSAIDs, 18 [18%] preferred injectable NSAIDs 47 [47%] preferred both and 7 [7%] preferred other modalities such as home remedies or ayurvedic medication.



- Out of all the participants in the study [n=100], 96 [96%] took NSAIDs twice a day after a meal, 1 [1%] twice a day before a meal and 3 [3%] before sleep.
- Out of all the participants in the study [n=100], 36 [36%] preferred to consume NSAIDs after being counselled about the side effects and 64 [64%] chose not to



DISCUSSION:

A number of side effects are associated with NSAID intake for which old age is a risk factor. Even short term use of NSAIDs is associated with potentially adverse outcomes. The FDA states that the risk of heart attack or stroke can occur as early as the first weeks of using an

NSAID. The risk may increase with longer use of the NSAID.

A study conducted by **Franceschi M. et al** in Italy to evaluate adverse drug reactions (ADRs) as a cause of admission to the geriatric unit reported that NSAIDs were responsible for 23.5% of admissions in the Geriatric ward related to ADRs.^[6]

In Germany, a study conducted by **Hoffmann W. et al.** on an elderly population revealed that the most frequent moderate potential Drug-Drug Interaction (DDI) was the combination of potassium excretion diuretics with anti-inflammatory drugs (eg. Ibuprofen).^[6] This information further reiterates the importance of exercising caution with NSAID intake in the elderly group because of potential ADRs and DDIs.

In our study, while patients were not aware of what NSAIDs were, they recognised certain drugs such as Ibuprofen and Diclofenac. When asked if they purchased one of these over the counter, it was noted that 7% did so. 23% patients purchased Paracetamol (Acetaminophen) when they experienced pain. The remaining 70% preferred to consult a physician and take the prescribed drugs.

According to revised guidelines laid by **American Geriatrics Society** in 2009, Acetaminophen should be the first line of management for mild to moderate chronic pain in the elderly. The guidelines also recommend that NSAIDs be given only when Acetaminophen fails to control the pain effectively as may be expected in chronic inflammatory conditions such as Rheumatoid Arthritis in which case NSAIDs may be more beneficial.^[7] As 70% of the study participants expressed that they would purchase any medication only after it has been prescribed, there is great potential in reducing NSAID consumption by curbing its prescription

In 2014, **A.V. Cherkasova et al.** analysed patients' beliefs and perceptions regarding NSAIDs and noted that 52.7% of their total respondents considered NSAIDs as unsafe and the remaining considered it as absolutely safe.^[8]

In our study, only 9% of the elderly patients were aware of possible adverse effects.

This revealed a significant lack of awareness among patients regarding the risks associated with medication from this class of drugs.

A study conducted in **Saudi Arabia** reported that more than half of the respondents claimed that information about ADRs might lead them to discontinue their medicines. More than one-third of respondents stated that their healthcare setting provided them with insufficient knowledge of ADRs.^[9]

Out of the total study participants interviewed in this study, 93% preferred to use NSAIDs (as a tablet or an intramuscular injection or both). The patients were then counselled regarding the potential side effects, following which 64% stated that they would limit their use of NSAIDs to when other safer options have failed to provide relief.

Hence it is imperative that patients be made aware of NSAIDs and their side effects. The geriatric population in particular ought to be cautioned against frequent NSAID use due to their increased susceptibility to the undesirable effects of these drugs.

CONCLUSION:

Patients aged 60 and above are at a greater risk of facing adverse effects accompanying NSAID consumption. Majority of the patients attending the OPD of a tertiary hospital in Sawangi (meghe), were unaware of the side effects associated with this class of drugs. The major portion of the study group preferred to obtain a prescription for a drug rather than purchasing it over the counter according to their convenience. 93% of the patients preferred NSAIDs for pain relief however after counselling regarding the possible adverse effects 36% stated they would continue with NSAID use and the remaining chose to use medication with a higher safety profile. Since most patients trust the physician's judgement there is a great scope to reduce NSAID consumption by reducing the prescription rate and heightening the patients' awareness regarding the associated risks along with benefits.

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