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Research Article

A PROSPECTIVE PRESCRIPTION PATTERN OF NON STEROIDAL ANTI-INFLAMMATORY DRUGS AMONG GENERAL PRACTITIONERS IN DAKSHINA KANNADA DISTRICT OF SOUTHERN INDIA

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ABSTRACT

The treatment of pain and inflammation is an important area of therapeutics. Over the past two decades, Non Steroidal Anti-Inflammatory Drugs (NSAIDs) have played a central role in these indications. The objective of this study was to evaluate the prescription pattern of Non Steroidal Anti-Inflammatory Drugs among general practioners in Dakshina Kannada district of southern India. A total 793 cases were recorded between May 2010 to Oct 2010 out of which males were 403 (50.82%) and females were 390 (49.18%). Out of 335 (42.24%) cases, there were 85 (42.5%) males and 115 (57.5%) females between the age group of 26 – 35 years and out of 44 (5.55%) cases, there were 7 (15.90%) males and 7 (15.90%) females between the age group of 56 – 65 years. Pattern of drug utilization shows that 22% of prescription contained for Paracetamol and diclofenac. Aceclofenac and Lornoxicam accounts for 1% of the prescription in our study. Among prescription for concurrent medications, about 132 (14.86%) were H_2 blockers, 126 (14.19%) were antibiotics and 3 (0.34%) were inj. Furosemide which was least prescribed.

Keywords: General practitioners, NSAIDs, Prescription pattern

INTRODUCTION

Analgesics, antipyretics, and nonsteroidal anti-inflammatory drugs (NSAIDs) are among the most commonly prescribed drugs in clinical practice. They are commonly used for inflammatory disorders of the musculoskeletal system. They constitute a heterogeneous group of compounds with the common ability to inhibit cyclooxygenase, and thus, prostaglandin synthesis [1-5].

NSAID-induced adverse reactions involve upper gastrointestinal (GI) tract complications, which can be life-threatening. GI complications occur in 1%-5% of patients taking NSAIDs for more than one year and result in high costs and mortality[6-11].

In India over 400 formulations of NSAIDs are marketed, resulting in wide spread exposure of patients to this class of drugs and its adverse effects[12].

For a developing country like India, where nearly 70% of the population resides in rural areas, a national drug policy is needed to rationalize drug usage. To achieve this it is very important to determine drug use pattern and monitor drug use profile over a period of time. Several studies of NSAID prescription patterns are available, but very few studies were conducted in rural areas[13, 14].

MATERIALS AND METHODS

Ethical committee clearance was obtained from Canara Research Ethical Committee, Bendoorwell, Mangalore, Karnataka, India Ref. No. Apr/02/2010/CREC.05. General Practioners of Dakshina Kannada district, India were approached with preformed proforma to enter the relevant data between May 2010 to Oct 2010.

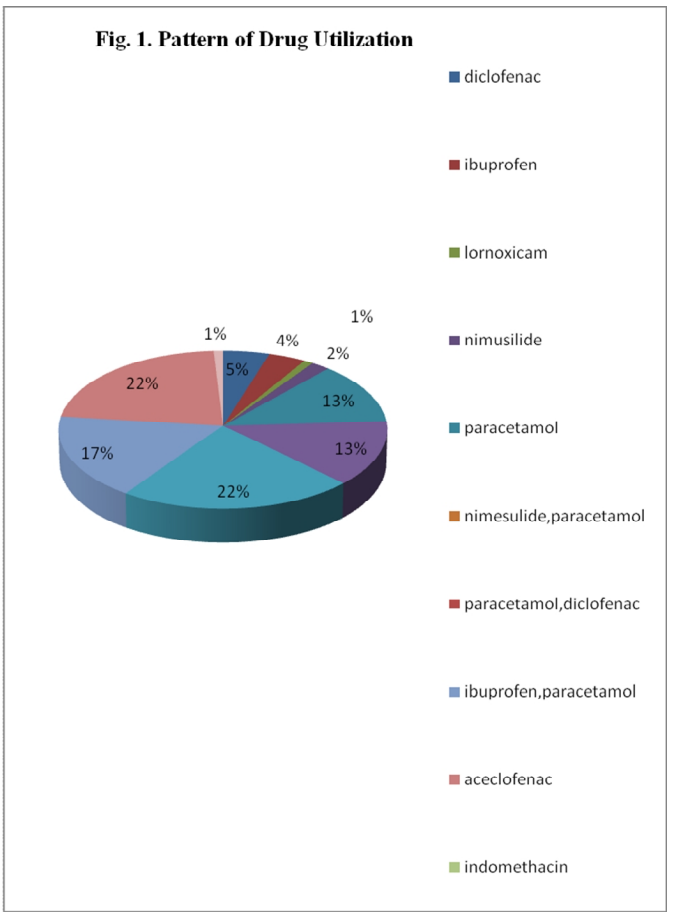
STATISTICS

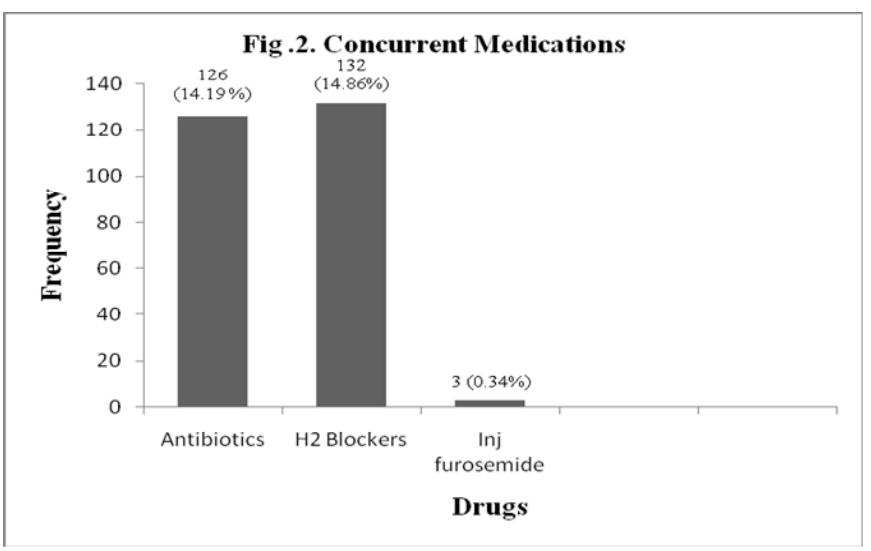
Descriptive statistical procedure and evaluation were done to analysis the result. Analysis was done in frequency and tabular form. All the relevant statistical methods were carried out using SPSS for windows (version 11.0).

RESULTS

Table 1: Demographic pattern

Age in Groups (Years)	Male n (%)	Females n (%)	Total n (%)
16- 25	85 (42.5%)	115 (57.5%)	200 (22.22%)
26 - 35	151(45.07%)	184 (54.93%)	335 (42.24%)
36 - 45	112 (71.33%)	45 (28.66%)	157 (19.8 %)
46 - 55	35 (61.40%)	22 (38.59%)	57 (7.19%)
56 - 65	7 (15.90%)	37 (84.09%)	44 (5.55%)
Total	390 (49.18%)	403 (50.82%)	793





DISCUSSION

Non Steroidal anti-inflammatory Drugs (NSAIDs) are most commonly prescribed drugs constituting majority of all drug prescriptions. The treatment of pain and inflammation is an important area of therapeutics. Over the past two decades, non steroidal anti-inflammatory drugs (NSAIDs) have played a central role in these indications. NSAIDs constitute the largest single group of drugs used worldwide, constituting more than 20% of all drug prescriptions[15].

In our study a total number of 793 cases were recorded between May 2010 to Oct 2010 out of which males were 403 (50.82%) and females were 390 (49.18%). It is interesting to note that out of 335 (42.24%) cases, there were 85 (42.5%) males and 115 (57.5%) females between the age group of 26 – 35 years. Similarly out of 44 (5.55%) cases, there were 7 (15.90%) males and 7 (15.90%) females between the age group of 56 – 65 years (Table.1). In our study, the pattern of drug utilization shows that 22% of prescription contained Paracetamol and diclofenac having same percentage. Aceclofenac and Lornoxicam accounted for 1% of the prescription in our study (Fig.1). Among prescription for concurrent medications, about 132 (14.86%) were H_2 blockers, 126 (14.19%) were antibiotics and 3 (0.34%) were inj. Furosemide which was least prescribed[16] (Fig.2). One of the earlier study conducted in Banglapradesh has mentioned Proton Pump Inhibitors (PPI) as frequently used concurrent medications as compared to H_2 blockers found in our study, possibly this may be due to awareness of the cost effectiveness among the general practitioners which shows the reduction economic burden of the patients[17].

Findings in our study is similar to findings observed in Dhaka Bangladesh prescription study, where paracetamol is most commonly prescribed drug in Medicine department, but diclofenac was also equally prescribed compared to paracetamol.

Interestingly we found no prescription contained even single selective COX-2 inhibitors which show that the medical practitioners are updated with cardiovascular adverse effects of this class of drugs. This evidence states that the health practitioners in Dakshina Kannada district of southern India are much concerned towards the quality of patient's life possibly due to updated pharmacovigilane knowledge.
However, further studies are needed involving larger area with study population to evaluate the exact pattern of prescription related to NSAIDs usage.

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