

Original research article

A study on self medication patterns of non-steroidal anti-inflammatory drugs by the community.**Dr. Rohit Kumar Singh¹, Dr. Jaleswar Prasad²****¹Associate Professor, Department of Pharmacology, Anugrah Narayan Magadh Medical College, Gaya, Bihar, India.****²Professor, Department of Pharmacology, Anugrah Narayan Magadh Medical College, Gaya, Bihar, India.****Corresponding Author: Dr. Jaleswar Prasad****Abstract**

A cross-sectional study on consumption patterns of non-steroidal anti-inflammatory drugs (NSAIDs) by the community without prescription was conducted in Gaya Town. A total of 504 encounters from 24 pharmacies were interviewed from people-found at purchase drugs at the pharmacy from their self demand. The commonest purchased NSAIDs per encounter was paracetamol (38.89%). Ibuprofen (11.91%), diclofenac sodium (12.9%), aspirin (6.94%), naproxen (6.36%) and other group all NSAIDs (23%) were also purchased. The influence by friends/ relatives (30.16%), previously advised by the doctor to purchase the NSAIDs for the same cornpteinal were (29.36%); pharmacy salesmen's advice (28.77%) and other reasons (11.71%). The total cost of purchased NSAIDs per encounter were less than Rs. 5(7.34%) Rs. 5 to less than Rs. 10 (44.64%), Rs. 10-25 (36.11%) and more than Rs. 25(11.91%). Single item of drug was purchased along with NSAIDs by 18.4% of encounters. Introduction.

Fever and pain are usually the early symptoms of most of diseases. To Cure and controls of these symptoms non-steroidal anti-inflammatory drugs (NSAIDs) have taken place in a large scale. To minimize the expenditure and hazards to consult with the physician and many more reasons people use to consume NSAIDs by his own will throughout the world. As Gaya is an important pilgrimage place and district headquarter of Gaya District whose population crossed 4 lacs, so it is a must to find out the patterns and magnitude of consummation of NSAIDs in this mass population. Almost all the drugs except narcotics were found to be sold in the market without prescription.

Materials and Methods

The study was carried out in Gaya Town during June-19 to Dec.-19 Thanas were selected by random method from the different parts of town so that it can represent the whole population. Six thanas were taken under study. The researcher tried to find out and note down each and every pharmacies of each Thana. Now, from each Thana two pharmacies were selected by random method. As a result, total 12 pharmacies were selected for research. Total 304 encounters (who purchased NSAIDs without prescription were interviewed by structured questionnaires from randomly selected pharmacies to enroll in the study. Data were processed, simplified, tabulated and analyzed.

Results

The commonest purchased NSAIDs per encounter were paracetamol (38.88%). Ibuprofen (11.91%) diclofenac sodium (12.9%), aspirin (6.94%), naproxen (6.36%) and other group of NSAIDs (23%) were purchased respectively (Table 1).

Twenty seven percent of encounters mentioned generic name while purchasing NSAIDs without prescription, the rest 73% of encounters mentioned the trade name of NSAIDs without prescription.

Table 1: Type of NSAIDs purchased per encounter

Drug	Percentage
Paracetamol	38.88
Ibuprofen	11.91
Diclofenac	12.9
Aspirin	6.94
Naproxen	6.36
Others	23

Age group of the encounters below 15 years (7.54%) 15-45 year was (80.36%) above 45 years' (12.10%) respectively of total encounters. Among the 504 encounters, males were 76% and female were 24%. The commonest occupation of the encounters was service (28.6%) laborer (15.4%); Housewife (16.3%), Business (10.7%) unemployed (11.2%), student (10.8%) and other occupational groups (7%) were observed respectively. Education status of the encounters below S.S.G. (35.92), S.S.C. qualified (18.25%), H.S.C. (26.0%) graduate (11.9%) post-graduate (7.93%) were observed.

Headache (25.4%) was the commonest chief complaint of the encounters. Backache (17.40%), traumatic injury (16.7%), fever (14.3%), Sports injury (8.1%) and other cause was mentioned (17.4%) as the chief complaint of encounters.

Encounters were motivated to consume the NSAIDs without prescription. The influence by the friends/ relative (30.16%) was the commonest reason behind to be influenced to consume NSAIDs without prescription, previously advised by the doctor to purchase the NSAIDs for the same complaint were (29.36%), pharmacy salesmen's advice (28.77%) behind to be influenced to consume NSAIDs without prescription.

The total cost of purchased NSAIDs per encounter were less than Rs. 5 (7.34%), Rs. 5 to less than Rs. 10' (44.64%) which were almost half of total encounters, Rs. 10-25 (36.11%) and more than Rs. 25 (11.91%) (Table II).

Table 2: Total cost of purchased NSAIDs per encounter

Rupees	Percentage
Less than 5	7.34
5 – 10	44.64
10-25	36.11
More than 25	11.91

History of exposure to traditional drugs were 36.1% and modern drugs were no history of exposure to traditional / mode drugs were 20.2% of total for the same complaint. Single item of drugs were purchased along with NSAIDs by 17.1% c encounters. H₂ blockers 12.47% antacid (18.4%) anti- histamine (10.9%) ; antibiotic (2.5%) ; other (1.0%) and other group of drugs (28.8%) were purchased along with by encounters.

Discussion

Almost all the drugs, except narcotic were found to be sold in the market of Gaya town with or without prescriptions. The Commenset purchased NSAIDs per encounter were paracetamol (38.88%). In one study in Phillipine it was observed that analgesis were extremely popular in the self medication on non- severe respiratory disorders, often being given three times a day (Hardon and Geest, 1987), In another study in USA, regarding the

safety of paracetamol and ibuprofen among children young than two years old, Lesko and Mitchell (1999) observed that the risk of serious adverse effect clinical events among the children of 2 years old receiving short- term treatment with either paracetamol or ibuprofen suspension was small and did not vary by choice of medication, Now it is the time to think about switching on ibuprofen from paracetamol, specially in short – term treatment for use in children even without prescription.

Twenty seven percent of encounters mentioned generic name while purchasing NSAIDs without prescription. The popularity of brand name of paracetamol and aspiration in mass people has guided them for mentioning generic name. Age group of the encourage 1545 years was 80.66% of total encounters. This is the working class of active people. There is the working class of active people. Their highest incidence to consume NSAIDs may be due to their frequent nonspecific psychosomatic illness. But in one study it was observed that, self administration was wide spread, 58.3% to 75.9% of adolescents reported taking an OTC medication of pain. Adolescents reported that they began to self administer medication at the age of 11 and 12 years (Chambers et al., 1997).

In one study in Sweden, Antonov and Isacon (1998) observed that among female 30.4% reported nonprescription analgesic use, while corresponding proportion among male Among the 504 encounters male were 76%.

The Commonest occupation of the encounters was service (28.6%) Service included person serving in government, semi government, autonomous or private organizations. The frequent sickness among the service personnel due to their insecurity of job and professional stress. The laborers includes daily laborer, rickshaw pullers, garments workers, construction workers and Industrial workers. As their nature of job required manual labor so, they used to suffer from different nonspecific musculoskeletal pain.

Regarding educational status it was observed that both literate and illiterate classes consume NSAIDs without prescription. In this study it was observed that encounters below SSC were 35.9% while postgraduate encounters were 7.93% to total encounters. But Quash (1985) observed in Singapore that self medication increases with the person's level of education.

Pain is the commonest symptom that takes patient to doctor (Bennet and Brown, 2003). Headache (25.4%) was the commonest chief complaint of the encounters, while fever was mentioned as chief complaint in 14.3% of encounters, It was observed that encounter consult doctor / unqualified prescriber for quick remedy while in headache / nonspecific pain, encounters directly consumes NSAIDs without prescription. Self medication behaviour for the treatment of headache is a widespread phenomenon with costly and hazardous consequences. The influence by the fiends / relative (30.16%) was the ommonest reason to consume NSAIDs without prescription, in the minor ailment (like headache), patients usually discuss with his / her friends / relatives. The fiends / relatives advised analgesic to him. Many drugs in developing countries are sold by untrained drug sellers who treat drugs as consumer items.

The cost of purchased NSAIDs was Rs. 5 to less than Rs. 10 in 45.64% of total purchased drugs. For short- term therapy and for symptomatic treatment encounter purchased NSIADs within the above mentioned limit. In addition to that the another cause to take treatment facility in small budget may be poverty. For the most people in world today every step of life, from infancy to old age, is taken under the twin shadows of poverty and inequality and under the double burden of suffering and disease (The World Health Report, 1995).

Twenty percent of encounters did not consume any medicine for the current symptom, while 36.10% of encounters received traditional medicine (homeopathy / ayurvedi) previsouly. It was observed that H₂ blocker (24.70%) or antacid (18.10%) was purchased along with NSAIDs, to prevent gastric adverse effects. Antihistamine (10.90%) and even antibiotic (2.50%) were also purchased in case of fever and other infective conditions.

In conclusion, this study may only given a baseline data regarding the patterns 2 and magnitude of consumption of NSAIDs only in Gaya Town. To get the profit the consumption of other OTC drugs without prescription and even other abuse –prone narcotic are needed to go for study in national level. An integrated plan may be designed to carry out study throughout the India from grass root to top in this regard.

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