



## NIMESULIDE INDUCED GASTRITIS IN A 10 YEAR OLD CHILD – A CASE REPORT

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Received: 04 Oct 2010, Revised and Accepted: 04 Nov 2010

## ABSTRACT

Nimesulide, a Preferential cyclo-oxygenase (COX-2) inhibitor was first launched in Italy in 1985 and subsequently marketed in more than 50 countries including India. In 2003, following worldwide reports of fatal adverse events in children, some countries banned it while others have issued restrictions in pediatric usage. In India, however, it is available for usage in adults. Some pharmaceutical companies have voluntarily withdrawn the pediatric formulation, although pediatric formulation containing nimesulide are still available in the market.

**Keywords:** Nimesulide, Over the counter (OTC) drugs, Adverse event

## INTRODUCTION

Nimesulide, a non-steroidal anti-inflammatory drug, is marketed in more than 50 countries. Reports of safety and tolerability of nimesulide are available as descriptive reviews, case reports and post marketing surveillance trials.<sup>1</sup> Individual reports have focused on serious hepatic, renal and other adverse effects following the administration of nimesulide. Probably that is why, few countries have discontinued the sale and prescription of this drug. Nimesulide was aggressively promoted in India and attained the position as anti-pyretic. Acute idiosyncratic hepatitis is one of the commonest forms of drug-induced hepatotoxicity culminating into the withdrawal of several drugs from the market despite proven clinical efficacy.<sup>2</sup> Over-the-counter (OTC) medications are promoted through television, radio, and print advertising. Advertisements create a relationship, in the mind of the consumer, between OTC medication use and compassion for one's children.<sup>3</sup>

## CASE REPORT

A 10 year old boy from urban slum area presented with Hematemesis. The vomitus was blood stained, bright red in colour, containing food particle and was non projectile. He complained of cough and cold with fever. The cough was dry and intermittent. His fever was moderate to high grade with chills at the time of admission. At home his father had given him two tablets of Nise containing 100mg Nimesulide each for fever at night on the previous day of hospital admission. Two tablets of Nise containing 100 mg of Nimesulide each had been given within two hours of interval on the previous night. One tablet of Nise did not help the child for his fever. So the father had given another tablet of Nise containing 100 mg of nimesulide to the child after two hours. Total of 200 mg of Nimesulide had been taken by the child within a short duration on previous night of admission. This medicine had been taken from the neighbour's house, which neighbour used to keep in his house to relieve pain and fever. The neighbour used to take 100 mg of Nise for pain & fever as and when required. At night 11.00 pm boy started vomiting stained by blood which occurred after half an hour of administration of the second tablet. Second episode of vomiting occurred at 8.00 am on the next day morning, which was about 10 cc blood in vomiting. The child came to the hospital at 9.30 am. He was investigated & his blood samples were sent for LFT, P.FalCIFerum & Urine examination (Routine & Microscopic). Blood samples were also sent for PT and APTT. All the blood investigations came out to be normal. (I.e.Hb-12.7 gm%, TC-7200, PI.Count-282000, Malarial parasite-negative). His SGPT was 12 U/L and PT and APTT were 18 sec. and 33.2 sec. respectively. The routine examination of urine came out to be normal. On admission his temperature was 100 F, Pulse 120/m, RR 22/min & BP was 110/70mm of Hg. His systemic examination of RS, CVS, Abdomen & CNS were normal. Immediately injection of Pantoprazole, Ondansetron, Isolyte-M & Paracetamol were given to the patient. Vit. K injection was also given stat. The patient was switched over to oral

Paracetamol, Ondansetron, Pantoprazole next day. The basis of the findings Nimesulide induced gastritis was diagnosed.

## RESULTS AND DISCUSSION

Although over the counter (OTC) drugs are meant for self medication and are of proven efficacy and safety. Their improper use due to lack of knowledge of their side effects and interactions, in proper use of these drugs could have serious implication especially in extreme of age ( children and old age) and special physiological condition, like pregnancy and lactation. Nimesulide is metabolized in liver and in subjects with hepatic insufficiency the rate of elimination of the drug and its metabolites are remarkably reduced; therefore a dose reduction may be required.<sup>4</sup> The same statement implies for the children due to their pharmacokinetics changes. In this case, there was no clinical evidence of liver failure but the dose of Nimesulide was more. Narnjo probability scale for the causality assessment of the adverse event concluded "possible" in nature for this case. There is no convincing clinical evidence from well-controlled double blind comparative trials that Nimesulide is better tolerated or more effective or has faster onset of action than Diclofenac, Naproxen, Piroxicam or Ibuprofen on the GI tract or more selective COX 2 inhibitor than other NSAID<sup>5</sup>. The maximum daily dose of Nimesulide is limited to 200 mg i.e. 100 mg BID in adults.<sup>6</sup> The company has not generated safety data for its OTC use at lower doses. The spontaneous reported ADRs represent only a small fraction (1%) of real toxicity. Class litigation, in recent drug injury cases, in USA show that these figures get multiplied 100 times when a drug is withdrawn due to toxicity. There are some solutions to prevent adverse event in paediatric population i.e. to remove the paediatric dosage forms of and irrational Nimesulide-containing combinations from the market. It seems that in India a large percentage of Nimesulide sales is in the form of combination products. Most of these combinations are irrational. Patients (and their parents) should be encouraged to use only the medication they need. The use of combination products with elaborate (often misleading) brand names discourages patients from learning the generic names of active ingredients, potentially leading to overdoses when taken with other Nimesulide-containing drugs.

## ACKNOWLEDGMENT

The authors are thankful to the Dean of pramukhswami Medical College for giving permission and faculties of pharmacology and paediatric departments of pramukhswami medical college, karamsad for their support.

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