



## A CASE OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE WITH NSAID INDUCED ENTEROPATHY

### Pharmacy

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### ABSTRACT

Non-steroidal anti-inflammatory drugs (NSAID) are regularly utilized for pain relieving and are among the most often medications in this world. The adverse effects of NSAID on the upper gastrointestinal tract are very much portrayed. Evidence shows that NSAID can be unsafe to the small intestine tract. The prevalence of NSAID-induced enteropathy is insecure. The utilization of NSAID has been related with little intestinal strictures, ulcerations, perforations, diarrhoea and villous atrophy. The reports of NSAID abuse and NSAID use issue are exceptional. In contrast to stomach, NSAID-induced lower gastrointestinal wounds are not brought about by concealment of prostaglandin union because of restraint of cyclooxygenase (COX) action. The pathogenesis of NSAID-induced enteropathy is unpredictable and not clearly understood. Until now, no new drugs have been developed for the treatment of NSAID-induced enteropathy. This case report portrays an investigation on the mechanism of NSAID induce enteropathy with comorbid condition.

### KEYWORDS

NSAID; Enteropathy; Report; Medication; Gastrointestinal

### Introduction

Non-steroidal anti-inflammatory drugs (NSAID) are the most commonly prescribed drugs to the patients who suffers with pain. NSAID are used in clinical practice for treatment and prevention of rheumatoid arthritis, osteoarthritis, collagen disease, and ischemic cardiovascular or cerebrovascular disease which have a multiple action like anti-inflammatory, analgesic and antiplatelet. However, NSAID are outstanding to build the danger of gastroduodenal entanglements, for example, peptic ulcer, dying, bleeding and apertures.<sup>1,2</sup> As of late, NSAID-initiated enteropathy has increased a lot of consideration because of the presentation of new developing demonstrative modalities, capsule endoscopy (CE) and device assisted enteroscopy just as because of the expanded utilization of ibuprofen and NSAID<sup>3</sup>. In the course of the most recent ten years, there has been a dynamic pattern in general gastrointestinal complications, for example, draining of blood and puncturing, with an abatement in upper gastrointestinal complications and an expansion in lower GI difficulties, which includes the jejunum, ileum, and large intestine. Upper GI complications tumbled from 87/100,000 people in 1996 to 47/100,000 people in 2005, while lower GI complications expanded from 20/100,000 to 33/100,000<sup>4</sup>. Patterns of NSAID use have been related with danger of antagonistic therapeutic outcomes, for example, intense interstitial nephritis and upper gastrointestinal dying<sup>5</sup>. In any case, ongoing advances in analytic gadgets used to take a gander at the small digestive system, for example, capsule endoscopy (CE) and double balloon inflatable endoscopy (DBE), enabled direct perception of the small intestine, and revealed the small gut wounds incited by NSAID<sup>6</sup>. Therefore, studies to investigate the mechanism of NSAID induced enteropathy and treatment modalities for small bowel damage should be performed in the future. Through this report, we intend to review potential candidates for the prevention of NSAID induced small intestinal injuries.

### Case description

A 61-year-old male was admitted in secondary care hospital, Coimbatore, Tamilnadu, India with the chief complaints of loose stool since ten days, history of abdominal pain, nausea and vomiting along with expectoration and breathlessness. Patient was a known case of chronic obstructive pulmonary disease. Patient past medical history revealed the long term use of Tab. diclowin (diclofenac+paracetamol) plus 375mg. Patient was a chronic smoker of beedi from past twenty three years. Patient was diagnosed with acute diarrhoea and NSAID induced enteropathy.

On examination blood pressure measured 120/80 mmHg, heart rate 98 beats per minute, respiratory rate 22 per minute and oxygen saturation is 96% on room air. Other systemic examinations were found to be normal. His laboratory investigations are depicted in Table 1.

Investigation Parameters	Patient observed value	Normal value
Haemoglobin(Hb)	10.0	14-18g/dl
Total count(TC)	293660	3.2-9.8 x10 <sup>3</sup> cells/mm <sup>3</sup>
Polymorphs	88	54-62%
Lymphocytes	10	25-33%
Monocytes	08	3.7%
Random blood sugar (RBS)	92mg	<200mg/dL
Sodium (Na)	127	135-147mEq
Potassium(K)	4.5	3.5-5mEq/L
Blood urea (BU)	89	20-40mg/dl
Serum creatinine(Sr.cr)	1.7	0.6-1.2mg/dl
AST-Aspartate aminotransferase (SGOT)	35	0.35U/L
ALT-Alanine aminotransferase (SGPT)	30	0-35U/L
Alkaline phosphate(ALP)	158	30-120U/L
Bilirubin Total	10.5	0.1-1mg/dl
Direct	0.3	0.-0.2mg/dl
Indirect	0.2	0.1-0.8mg/dl

On day 1 he was treated with Inj. ornof (ofloxacin) 200mg IV BD, Inj. nexpro (esomeprazole) 40mg IV BD, Inj. emeset (ondansetron) 4mg IV BD, Tab. wysolone(prednisolone) 40mg OD, Tab. acebrobid (acebophylline) 200mg OD, Tab. lasix (furosemide)20mg OD, Tab. calcium BD, Cap. alpha D3(alfacalcidol) OD, Cap.VSL#3(probiotic) BD and Neb. budecort+duoline TDS.

On day 2 at examination, patient was stable with vitals normal. No new complaints was observed. The same treatment was continued along with tiova (tiotropium bromide) inhaler.

On day 3,4,5 patient was conscious, oriented, and vitals were found to be normal. Patient was continued with the same medications. Patient was discharged and referred to multispecialty hospital for further treatment. On discharge, patient was prescribed with Tab. colospa r (mebeverine) BD, Tab. acebophylline 200mg OD, Tab. ornof (ofloxacin) 200mg BD, Cap.VSKL3# (probiotic) OD, Tab. shelcal (calcium) OD, duolin inhaler 2 puffs BD. Patient's consent was taken for publishing his data.

### Discussion

NSAID are the drugs which are available at ease without any obstacle.

Previously the treatment was not potent, now new promising drugs along with few techniques are well received. Proton pump inhibitors<sup>7</sup>, prostaglandins such as misoprostol<sup>3</sup>, broad spectrum antibiotics are helpful in reduction of enteropathy<sup>8</sup>, probiotics reduces the small bowel injuries<sup>9</sup> are found to be helpful in fighting with NSAID induced enteropathy.

In our case patient was a known case of chronic obstructive disease and after getting admitted to intensive care unit he was finally diagnosed with NSAID induced enteropathy; where he was treated with proton pump inhibitors (Esomeprazole) and corticosteroids. Prostaglandins should have been given for the safety. Capsule endoscopy would have been a better choice as it easily detects small wounds with injury in gut area. The patient was managed with symptomatic treatment.

### Conclusion

Non steroid anti-inflammatory drugs inducing enteropathy is common but along with other comorbid conditions is very rare. In this aspect the NSAID should be prescribed only by registered practitioner's. These are easily available over the counter drugs where, no strict regulation has been followed. However a strong and potent clinical treatment is required to fight with existing NSAID.

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### Conflict of interest

The authors declare none.

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