

## Irrational drug use and gastro-duodenal ulcerations in a 3-month-old infant: A case report

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Received - 27 March 2019

Initial Review - 08 May 2019

Accepted - 30 May 2019

### ABSTRACT

Upper gastrointestinal bleed (UGIB) is an unusual but potentially life-threatening emergency in children. Irrational use of medicines is one of most common cause. We, herein report a case of a three-month-old male child who presented with massive hematemesis and melena, probably due to the use of multiple antibiotics and analgesic use. On upper gastrointestinal endoscopy, multiple diffuse gastric and duodenal ulcers were detected. He was treated with proton pump inhibitors (PPI) and recovered completely within seven days.

**Keywords:** *Gastroduodenal ulceration, Hematemesis, Irrational drug use.*

Upper gastrointestinal bleeding (UGIB) is an unusual but potentially serious and life-threatening condition in children [1,2,3]. Incidence of upper gastrointestinal bleed in infants is reported to be 1-2/10000/year [4]. The common cause of UGIB in infant includes drugs, caustics, stress esophagitis, hemorrhagic disease of newborn, peptic ulcer disease, oesophageal and gastric varices and vascular malformations [5]. Here, we report a case of massive gastrointestinal bleed in a three-month-old baby due to indiscriminate and irrational drug use.

### CASE REPORT

A previously healthy three and half-month-old male child born to non-consanguineous parents presented to our emergency with a history of multiple episodes of blood in vomitus (50 to 100 ml of blood in each episode) and black tarry color stool for two days. The patient had a history of upper respiratory tract infection five days ago for which he consulted a local practitioner and azithromycin, nalidixic acid and ibuprofen were prescribed. The patient had no previous history of atopy, allergy or bleeding manifestations.

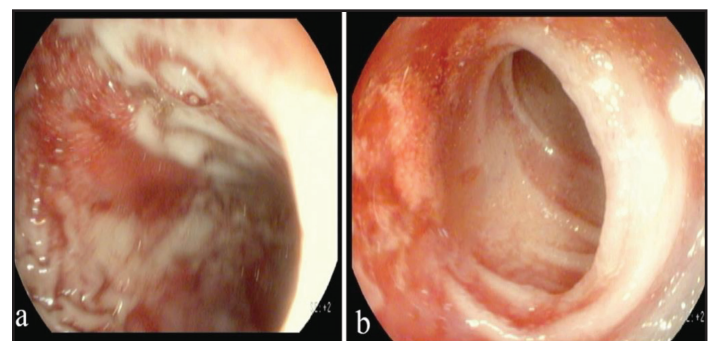
On examination, the patient was afebrile, pale, heart rate 140/min, respiratory rate 28/min and blood pressure 90/60 mm-Hg. Icterus, cyanosis, clubbing, and lymphadenopathy were absent. Systemic examination was normal.

Blood investigations were as follows: haemoglobin 5.9gm/dl, Total Leucocyte count (TLC) 16,500/mm<sup>3</sup> (P30,L66,E2,M2), platelet count 200,000/mm<sup>3</sup>, urea 30mg/dl, serum creatinine 0.2 mg/dl, serum bilirubin (total) 0.3 mg/dl, Aspartate aminotransferase (AST) 91 U/L, Alanine aminotransferase (ALT) 68 U/L, Sodium 138mmol/L, Potassium 3.7mmol/L, Calcium

9.9mg/dl, C-Reactive Protein (CRP) 1.5mg/dl, prothrombin time (PT) 14.7, International Normalised Ratio (INR) 1.2 and serum IgE was normal. Ultrasound abdomen was normal.

On the second day of admission, upper gastrointestinal endoscopy was done which showed severe erosive pangastritis and multiple duodenal ulcers (Fig 1 and 2). Histology of D2 revealed: enteral mucosa with maintained architecture, lamina propria with vascular congestion, sparse mononuclear inflammation and relative prominence of parietal cells, no significant eosinophilic prominence or evidence of *H. pylori* was present. Serum gastrin levels were planned. He was managed conservatively with IV fluids, blood transfusion, inj pantoprazole for 3 days followed by oral lansoprazole and syrup sucralfate.

There were no further episodes of hematemesis but melena persisted for next 6 days. Repeat endoscopy done after one week showed healed gastric and duodenal ulcers without any scarring (Fig 3). Serum gastrin level, done after discontinuation of proton



**Figure 1:** (a) Diffuse gastric ulcerations seen in the body of stomach; (b) ulcer in the first part of duodenum



Figure 2: Normal mucosa- second part of duodenum.

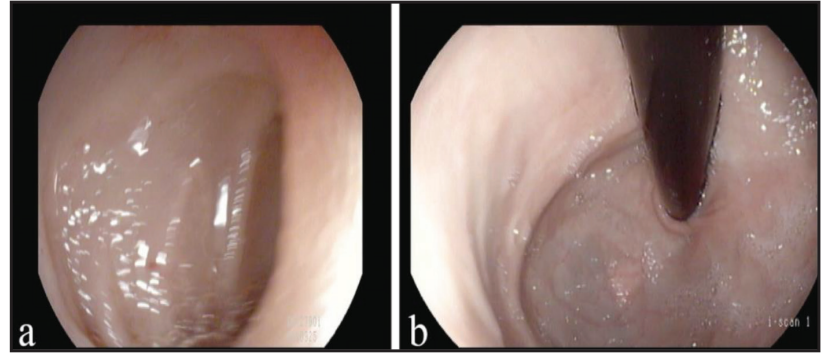


Figure 3: (a) Normal duodenal mucosa- duodenum part 1 after therapy; (b) Normal gastric mucosa after therapy

pump inhibitors for 2 weeks, was normal 17pg/ml. During follow-up, the patient was asymptomatic and no repeat episode of hematemesis and melena occurred. The patient is now well thriving and gaining weight.

## DISCUSSION

Upper gastrointestinal bleeding is a life-threatening paediatric emergency. Irrational use of drugs is one of the most common cause of UGIB in infants. Potassium tablets, thiazides, non-steroidal anti-inflammatory drugs (NSAIDs) are known causes of intestinal ulcers [6-8]. In 2014, Jafari *et al* found NSAIDs as an important cause of gastrointestinal tract bleeding in children [9]. In the present case, the use of nalidixic acid and ibuprofen could possibly have caused severe gastric erosions and duodenal ulcerations.

Management of UGIB includes effective resuscitation and stabilization with IV fluids, blood products followed by diagnostic evaluation. Early upper GI endoscopy can confirm the diagnosis and allow targeted treatment thereby resulting in reduced morbidity, hospital stay, recurrence and need for surgery. In our case early, specific diagnosis and management could address the parent's anxiety and achieve an early favorable outcome.

## CONCLUSION

This case highlights the rampant irrational use of unapproved drug combination, antibiotics, and analgesic for minor viral

illness. Therefore drug and drug combinations should be prescribed judiciously.

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*Funding: None; Conflict of Interest: None Stated.*

**How to cite this article:** Anwar S, Narayani VK, Deswal S, Dewan V. Irrational drug use and gastro-duodenal ulcerations in a 3-month-old infant: A case report. *Indian J Case Reports.* 2019;5(3):266-267.

Doi: 10.32677/IJCR.2019.v05.i03.024