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Chronic NSAID Abuse Presenting as Pre-Pyloric Gastric Perforation

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Introduction

Non-steroidal is used by 30 million patients worldwide and is second only to Helicobacter pylori for the most common cause of gastric and duodenal ulcers. Peptic ulcer disease in elders was known to be the main culprit of gastric perforation but due to advanced medical management, about less than 10% of these patients have their disease complicated by perforations. Iatrogenic via upper endoscopy or trauma are more common causes of gastric perforations now. Here, we are presenting a case of a young man who presented with gastric perforation without any prior history of abdominal pain, heartburn, H pylori infections, recent procedures or trauma. The only thing his history was positive for was chronic usage of NSAIDs- which didn't cause him any trouble until this gastric perforation.

Case Presentation

A 29-year-old male with a past medical history of anxiety was brought to the Emergency Department with sudden onset of abdominal pain about 6 hours before the hospital visit, accompanied by nausea and vomiting. He does not take any prescribed medications but had been taking over-the-counter Advil, up to 800mg a day, for the past 2 years for a chronic toothache. No smoking, alcohol or illicit drug

history. During the initial examination, the patient has a rigid, scaphoid abdomen with no bowel sounds and diffuse tenderness, emphasized in the epigastric area. Labs were significant for white blood cell count elevated at 15.8, creatinine elevated at 1.3, glucose elevated at 172, and lipase elevated at 450. Vitals were stable. CT scan of the abdomen and pelvis with IV contrast showed free intraperitoneal air as well as fluid in the peritoneal gutters with perforation and associated with peritonitis. The colon is distended with stool up to the splenic flexure at which point there is an abrupt transition. Based on patient presentation and CT results, he was taken to the operating room for exploratory laparotomy. The procedure showed 0.5x0.5cm pre-pyloric perforation in the anterior wall with free food particles and bile with no biliary leak (Figure 1,2&3). The perforation was repaired laparoscopically with modified Graham path and fibrin glue (Figure 4&5). Afterward, methylene blue was administered to check and confirm there were no intraoperative leaks. On postoperative day three, upper gastrointestinal series with gastrografin was done (Figure 6) which revealed no extravasation and no gastric outlet obstruction. He was started on Proton pump inhibitors and the diet advanced as tolerated. The patient was stable and discharged with a follow-up endoscopy scheduled in eight weeks.

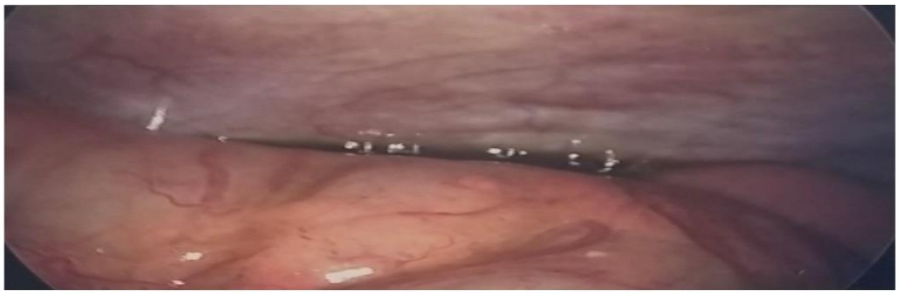

Figure 1. Pseudomembranous inflammatory changes around the falciform ligament

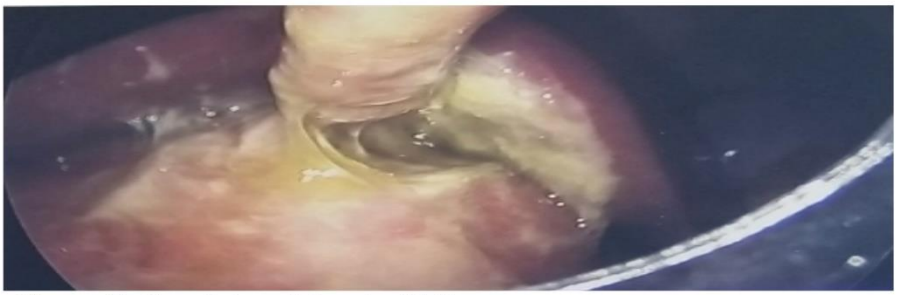

Figure 2. Free intra-abdominal bile

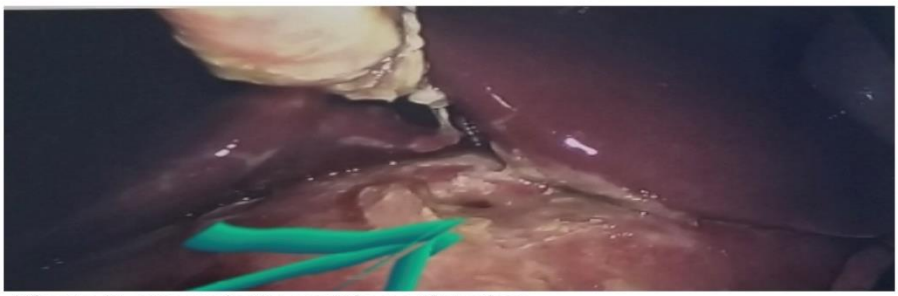

Figure 3. Pre-pyloric gastric perforation

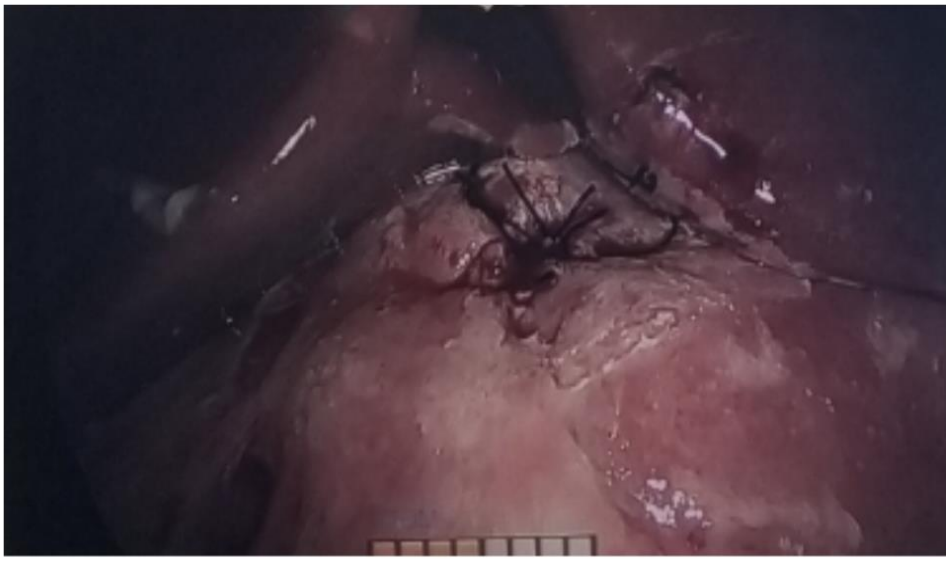

Figure 4. Primary suture repair of pre-pyloric gastric perforation

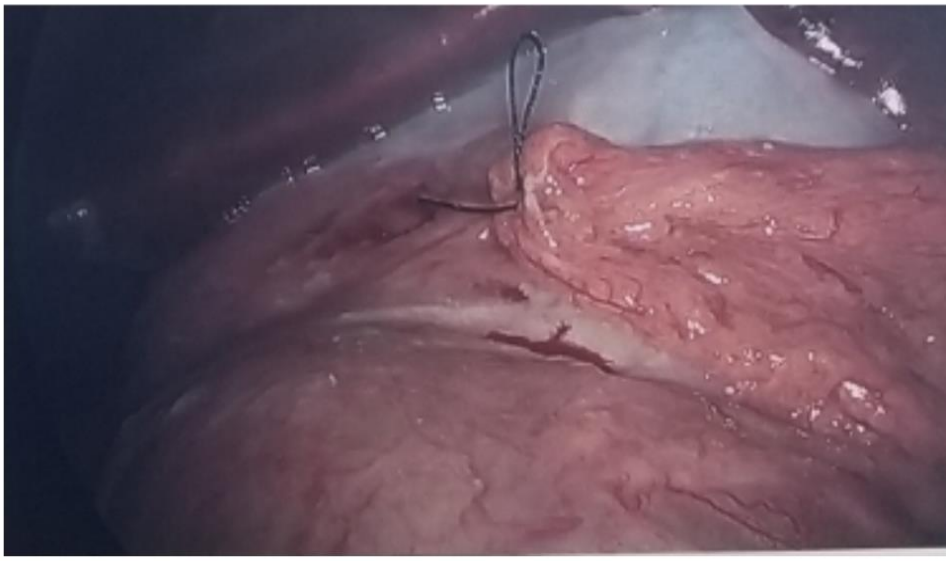

Figure 5. Omental patch over primary suture repair of pre-pyloric gastric perforation

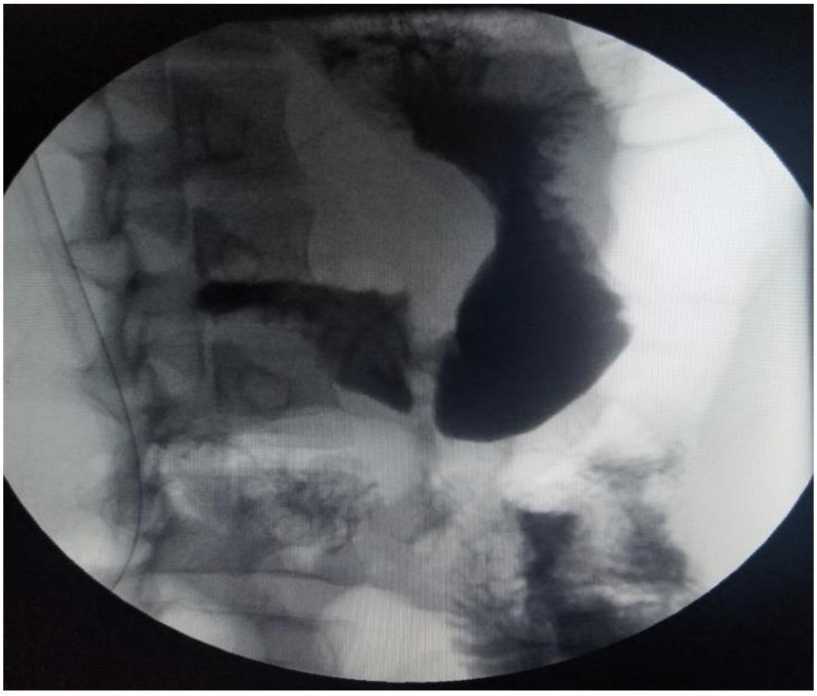

Figure 6. Upper gastrointestinal series with gastrografin on post-operative day 3

Discussion

The class of nonsteroidal anti-inflammatory drugs (NSAIDs) is one of the most used over-the-counter medications worldwide due to their effectiveness. The severity of their overuse effect was clearly shown in the case above. The addition of acid reducers, such as PPIs and H2-receptor antagonists, was found to be beneficial at reducing the risk of duodenal ulcers but not gastric ulcers. Enteric-coated NSAIDs were found to be useful in reducing upper GI symptoms through slow-release but also increase lower GI complications. Overall, no one therapy can provide optimal relief and the complications of NSAID misuse warrant the development of alternative medications or therapies. In addition to potential new NSAID replacements, something that can be done now would be improvements in patient education. With our patient, greater awareness about his chronic over-the-counter NSAID use could have prevented this unfortunate perforation.

Conclusion

overall, there does not seem to be a single therapy that provides optimal relief. The complications of NSAID misuse warrant the development of alternative medications or therapies. In addition to potential new NSAID replacements, something that can be done now would be improvements in patient education.

With our patient, greater awareness about his chronic over-the-counter NSAID use could have prevented this unfortunate perforation.

References

1.Zhou Y, Boudreau DM, Freedman AN. Trends in the use of aspirin and nonsteroidal anti-inflammatory drugs in the general U.S. population. Pharmacoepidemiol Drug Saf. 2014;23(1):43–50.

2.Laine L, Bombardier C, Hawkey CJ, et al. Stratifying the risk of NSAID-related upper gastrointestinal clinical events: results of a double-blind outcomes study in patients with rheumatoid arthritis. Gastroenterology. 2002;123(4):1006–1012

3.Straube S, Tramèr MR, Moore RA, Derry S, McQuay HJ. Mortality with upper gastrointestinal bleeding and perforation: effects of time and NSAID use. BMC Gastroenterol. 2009;9:41.