



OBJECTIVE

At the conclusion of the presentation, participants will be informed of an alternative source of post-tonsillectomy hematemesis and reminded to consider stress ulcer prophylaxis for tonsillectomy patients at high risk.

BACKGROUND

- Upper gastrointestinal (UGI) ulcers are rare post-tonsillectomy and are limited to case reports.^{1,2} There are no reports of pediatric duodenal ulcer post-tonsillectomy.
- Post-tonsillectomy hemorrhage occurs at a rate of 1-8% and frequently presents as hematemesis.³⁻⁷
- Pediatric UGI hemorrhage has a mortality rate of 2%.⁸
- Risk factors for pediatric UGI bleed include mechanical ventilation, critical illness, coagulopathy, and *Helicobacter pylori* infection.⁹⁻¹¹
- Non-steroidal anti-inflammatory drugs (NSAIDs) including Ketorolac have not shown significant increases in post-tonsillectomy hemorrhage in children.^{4,12} However, NSAID use in pediatrics has shown association with GI bleeds.^{13,14}
- In adults, Ketorolac has over three times the relative risk of GI bleed or perforation compared with other NSAIDs.¹⁵
- In a study of pediatric post-operative orthognathic surgery patients, only patients exposed to mechanical ventilation, steroids, and NSAIDs developed a GI bleed.¹⁶

METHODS

- This is a case of a six year old male with Autism Spectrum Disorder who underwent an adenotonsillectomy for chronic adenotonsillitis and adenotonsillar hypertrophy.
- From post-operative days 3 - 7 he was admitted for dehydration and decreased oral intake. He was treated with IV fluids, pain medications including Ketorolac, and one dose of Dexamethasone. He begun taking oral intake on post-operative day 7 and was discharged home.
- On post-operative day 12 he presented to the ED with three episodes of bright red hematemesis that had resolved by presentation. On examination, his vitals were stable and there was no blood from the oral cavity. He was admitted for observation.

IMAGES

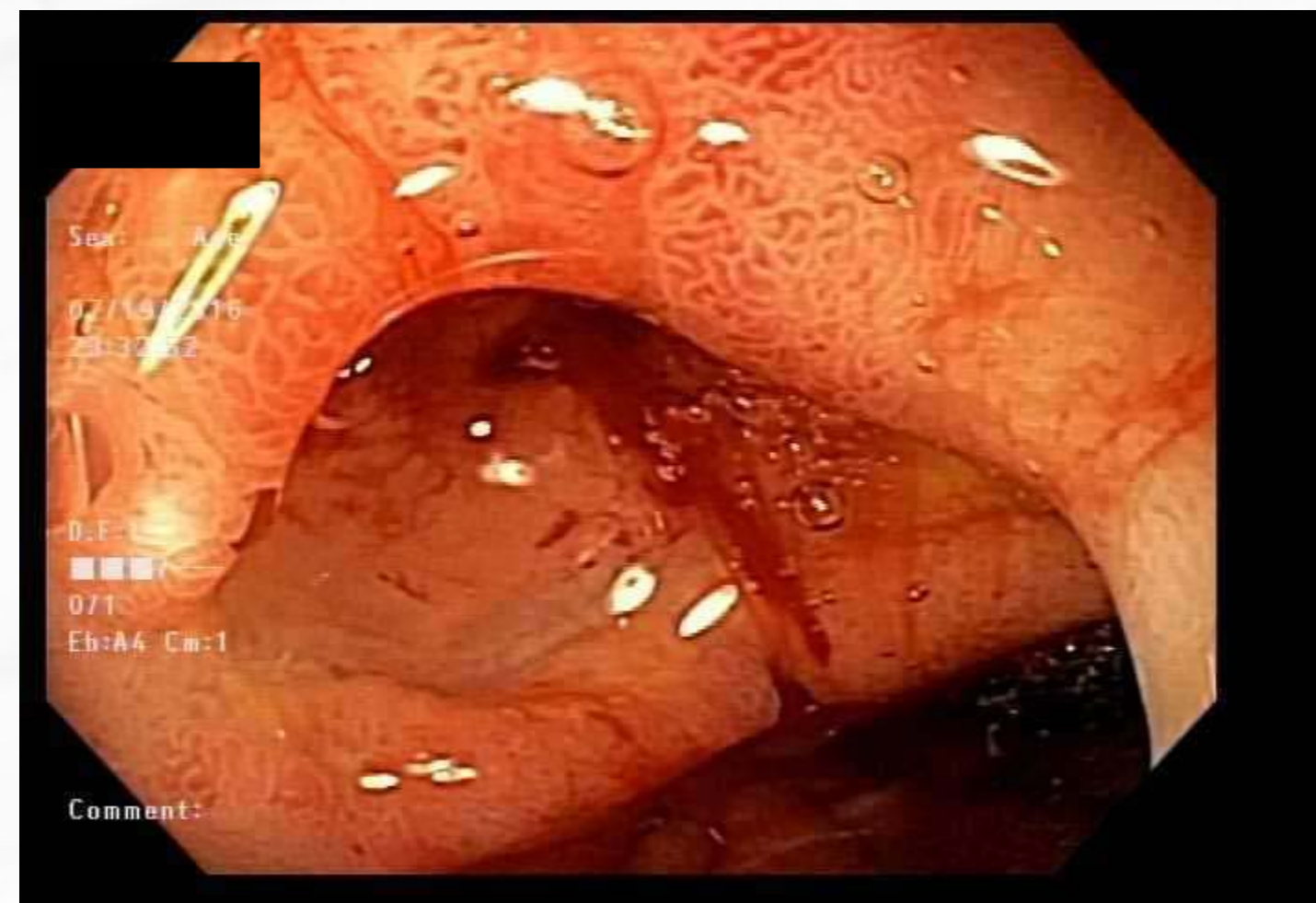


Figure 1. Initial EGD showing cratered duodenal ulcer

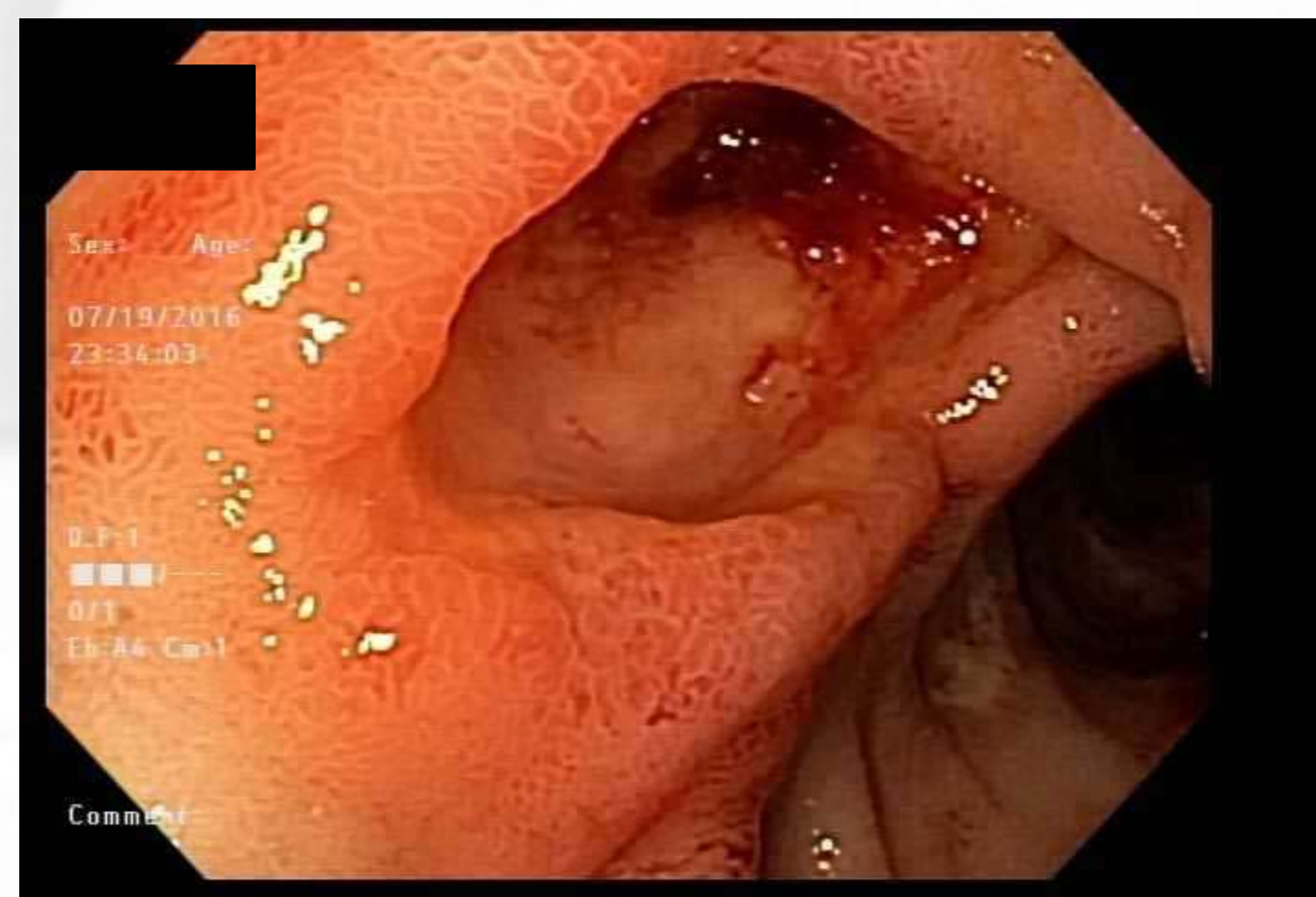


Figure 2: Initial EGD showing 3rd ulcer



Figure 3. 2nd EGD showing ulcer with clean base

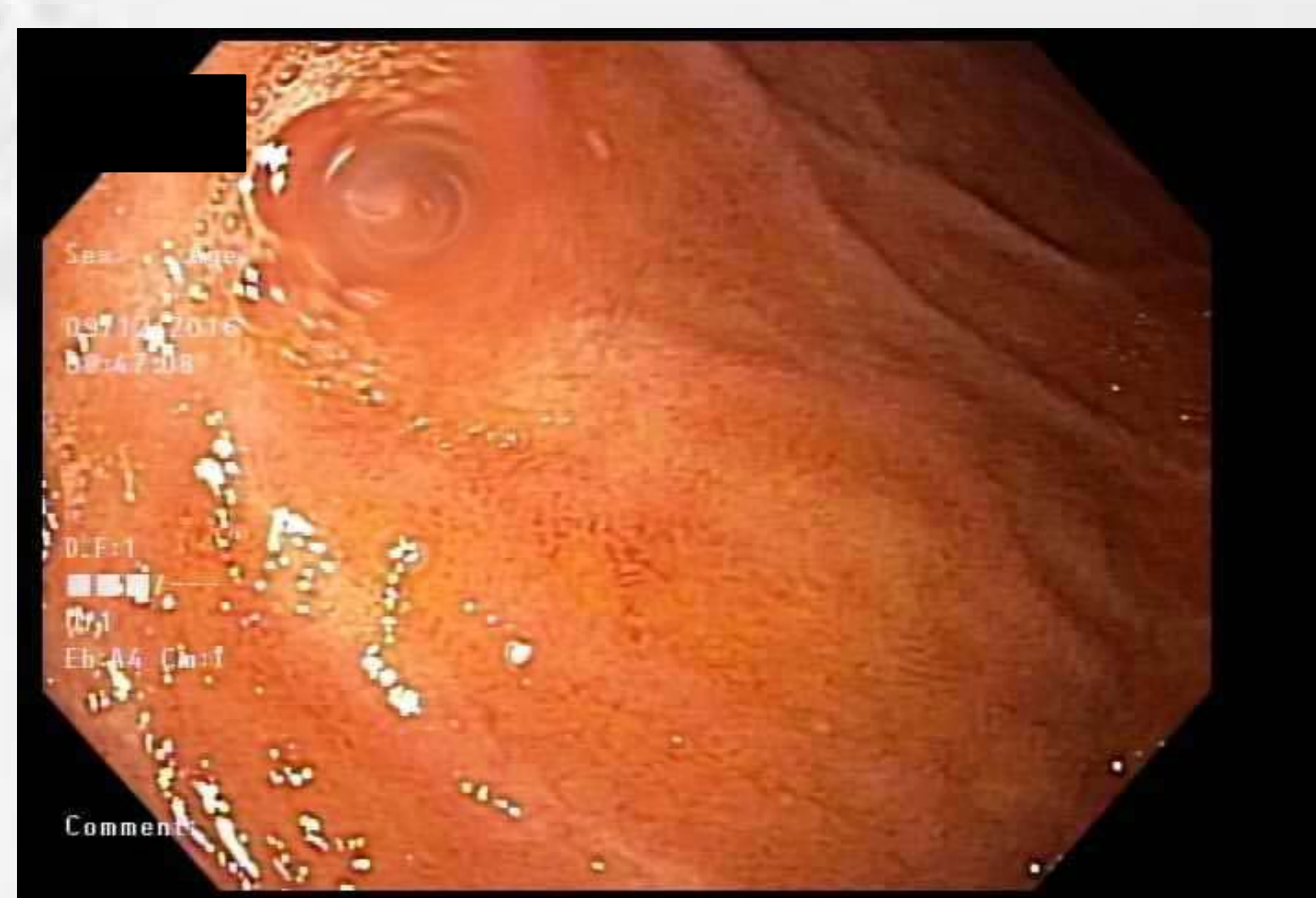


Figure 4. 3rd EGD showing healthy duodenum

RESULTS

- On the evening of re-admission the patient had a repeat episode of hematemesis and brief episode of unresponsiveness.
- On evaluation, the patient was pale with systolic blood pressure in the 80s but responsive. Blood transfusion was started and he was emergently transported to the operating room.
- In the OR, the tonsillar fossa was well mucosalized and there was no evidence of bleeding from the tonsillar fossa or adenoid bed. We suctioned 400cc of fresh blood from the stomach.
- Pediatric Gastroenterology was called and performed an esophagogastroduodenoscopy. Three actively bleeding duodenal ulcers were identified and were injected with epinephrine for effective hemostasis.
- The patient was transferred to the pediatric ICU and started on a proton pump inhibitor drip.
- He was transfused a total of 2 units packed red blood cells, 1 unit of plasma, and 1 unit of cryoprecipitate.
- He underwent another EGD 3 days later which revealed ulcers with clean bases and no bleeding. *Helicobacter pylori* serology was negative.
- After 5 days of IV proton pump inhibitor he was successfully transitioned to oral PPI.
- Two months post-op he underwent a repeat EGD which showed a normal duodenum.
- He was treated with an oral PPI for a total of 6 months and had no recurrence of gastrointestinal bleeding.

CONCLUSIONS

This is the first reported case of pediatric post-tonsillectomy duodenal ulcer. Pediatric gastrointestinal ulcers are more frequent in patients with risk factors such as critical illness and *Helicobacter pylori* infection. Our patient was at increased risk due to continued steroid and Ketorolac administration. We now advocate for high risk post-tonsillectomy patients admitted for dehydration to have stress ulcer prophylaxis.

ACKNOWLEDGEMENT

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