NON-HEALING GASTRIC ULCER ASSOCIATED WITH CANDIDA INFECTION

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Abstract

Candida bezoars of the stomach usually occur after gastric surgery. We report a small Candida mass occurring on a non-healing gastric ulcer in a 40-year-old male non-smoker. The ulcer healed with fluconazole and withdrawal of the proton pump inhibitor.

Key words: Gastric ulcer, India, yeast

Gastric ulcer healing rate after six weeks of treatment with a proton pump inhibitor is approximately 90%.\(^1\) Polypoid growth of Candida in the stomach, often large, has been reported as Candida / yeast bezoars. Yeast bezoars usually occur post gastric surgery.\(^2\) We report an unusual non-healing gastric ulcer associated with a small polypoid mass due to Candida, in a nonoperated stomach.

Case Report

A 40-year-old male, presented with hematemesis and melena. He had a viral prodrome and took analgesics for five days prior to admission. He was previously healthy and was neither an alcoholic nor a smoker.

On examination, he had pallor but was otherwise normal. Laboratory evaluation revealed haemoglobin 4.9 gm/dL, total WBC count 7000/ mm\(^3\), serum total protein 4.9 gm/dL, serum albumin 2.7 gm/dL, aspartate aminotransferase x 1.8 times upper limit of normal. The rest of the liver function tests and prothrombin time were normal. Routine urine examination was normal. Anti-HIV-ELISA was negative. Initial upper GI endoscopy showed a small prepyloric ulcer with an adherent clot. He was managed with intravenous pantoprazole and packed red blood cell transfusions. Patient did not have any re-bleed and was discharged on an oral proton pump inhibitor.

A repeat endoscopy after 15 days revealed a large nonhealing prepyloric ulcer about 2 cm in diameter, with irregular margins and yellow base. The second part of the duodenum showed hookworms. He was given anti-helminthic medication and maintained on single daily dose of a proton pump inhibitor (PPI). The biopsy of the edge of the ulcer showed necrotic tissue with acute inflammatory exudates and colonies of fungal spores and pseudohyphae resembling Candida.

After six weeks of PPI, a follow-up endoscopy showed the ulcer persisting with thick surrounding folds (Fig. A). A 1.5 cm bile-stained polypoid mass was found prolapsing from the stomach into the duodenum, which was snared and removed. Biopsy of the ulcer showed necrotic tissue with acute inflammatory cell infiltrate with blastospores of Candida and AB-PAS stain highlights PAS positive fungal hyphae (Figs. C, D). Acid suppression therapy was withheld and he was treated with oral fluconazole for 10 days. Follow-up endoscopy, one month after fluconazole therapy, revealed a small shallow pseudo-diverticulum and scar in the prepyloric region (Fig. B). He remained asymptomatic on follow-up for 12 months.

Discussion

Healing rates for gastric ulcer on treatment with any proton pump inhibitor is 80 to 93%.\(^1\) Non-healing benign gastric ulcers may be associated with smoking\(^1\) or may be due to unusual causes such as Zollinger-Ellison syndrome, tuberculosis,\(^4\) Crohn’s,\(^5\) polyarteritis nodosa, eosinophilic gastritis or low grade lymphoma. Candida is a normal commensal of the gastrointestinal tract, but is infrequently isolated from the healthy stomach. Fungal colonisation was found in 11 to 54% of gastric and duodenal ulcers when prospectively studied.\(^6,7\) In rats, fungal colonisation of gastric ulcer is associated with hypochlorhydria and delayed healing.\(^8\) The role of Candida infection in delaying gastric ulcer healing is controversial. While there are case reports of delayed gastric healing associated with Candida infection, recent prospective studies showed no difference in the healing rate.\(^7\)

The role of acid suppression in promoting gastric Candida infection is also controversial. While yeast bezoars are commonly encountered post gastric surgery\(^2\) and an earlier study suggested predisposition to Candida overgrowth with H2-receptor antagonist therapy, a recent prospective study, did not find higher Candida culture rates in patients receiving H2-blockers or PPI compared to no treatment with acid suppressants.\(^9\)

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Yeast bezoar formation is seen post Bilroth I or II surgery. A case series from Finland in 1975 reported that 40 out of 43 patients diagnosed to have yeast bezoar had previous gastric surgery. Only three patients had yeast bezoars without previous gastric surgery. Sixty-three percent of their patients were detected within one year of the operation. Their diagnosis was based on conventional radiology. The present case had a small fungal mass without previous gastric surgery or immunosuppressive state.

The available evidence suggests that most patients with gastric ulcer and Candida do not require treatment for Candida. When treatment is considered necessary, antifungals should be given. Endoscopy has been used to physically disrupt the bezoar with the aid of high pressure water system (water-pick), a snare or forceps.

References


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