



Uncommon presentation: Primary gastric actinomycosis

To the Editor,

Primary gastric actinomycosis is extremely rare. It occurs predominantly in immunocompetent people but may occur in those with diminished host defenses. To date, 24 cases have been published (1).

We present the case of an 18-year-old woman admitted to our hospital with persistent epigastric pain lasting two months and a weight loss of approximately 5 kg during the same period. She had no history of alcohol, tobacco, steroid, anticoagulant, or nonsteroidal anti-inflammatory drug use. Investigations were initiated with informed consent. Laboratory test results were: hemoglobin, 13 g/dL; white blood cell count, 9000/ μ L; platelet count, 353000/ μ L; aspartate aminotransferase, 22 U/L; alanine aminotransferase, 19 U/L; and total bilirubin, 0.42 mg/dl. Upper gastrointestinal endoscopy was performed; the mucosa of the corpus was hyperemic, and the mucosa of the antrum had a nodular appearance (Figure 1). Endoscopic biopsies were obtained from the mucosa of the antrum and corpus. Histological examination of the specimens revealed gram-positive filamentous rods in the lamina propria with intact mucosa (Figure 2) which, supported by a positive test for *Helicobacter pylori*, resulted in a diagnosis of actinomycosis.

Since gastric pH inhibits the growth of microorganisms, primary gastric actinomycosis is seen rarely in clinical practice. Actinomycetes do not invade intact mucous membranes but may become pathogenic in the presence of damaged mucosal barriers (1,2). Unlike the other reported cases, our case had no predisposing factors such as immunosuppression and mucosal barrier disruption.

Actinomycosis is diagnosed by the identification of sulfur granules in aspirated pus or biopsy specimens, and confirmed by Gram-staining of smears and cultivation

of pus. Histologically, actinomycetes are gram-positive, branching filamentous hypha-like anaerobes. Characteristics of the disease include localized fibrosis and inflammation (3).



Figure 1. Endoscopic appearance of nodular lesions in the gastric antrum

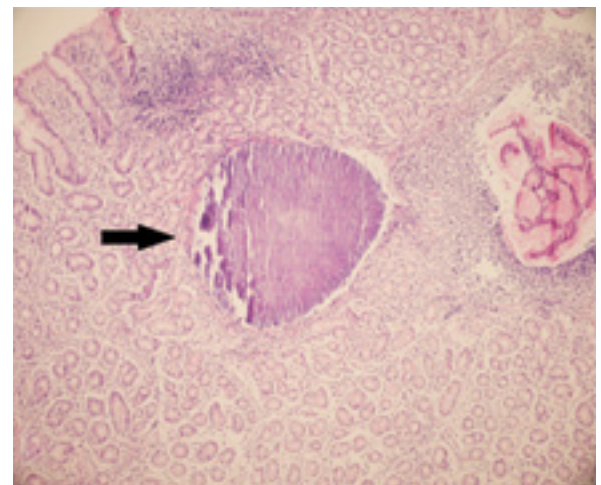


Figure 2. Histopathologic appearance of gastric actinomycosis (H&E, X100)

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Uncomplicated actinomycosis can be treated with antibiotics (4); *Actinomyces* species are susceptible to penicillin, however the duration of treatment for permanent recovery varies from several weeks to months (5). In this case, crystalline penicillin G (Kristapen, Deva Medical, İstanbul, Turkey) (24 million u/day) was administered for two weeks, after which the patient was discharged and advised to take oral penicillin (amoxicillin 500 mg BID) (Largopen, Bilim Medical, İstanbul, Turkey) for up to 12 months.

Gastric actinomycosis is an extremely rare disease. It can occur in immunocompetent individuals with intact gastric mucosal barrier. We present this case due to its rarity and, unlike other cases in the literature, the absence of predisposing factors such as immunosuppression and mucosal barrier disruption.

Ethics Committee Approval: N/A.

Informed Consent: Written informed consent was obtained from patient who participated in this case.

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REFERENCES

1. Lee SH, Kim HJ, Kim HJ, et al. Primary gastric actinomycosis diagnosed by endoscopic biopsy: Case report. *Gastrointest Endosc* 2004; 59: 586-9. [\[CrossRef\]](#)
2. Sumer Y, Yılmaz B, Emre B, Ugur C. Abdominal mass secondary to actinomyces infection: an unusual presentation and its treatment. *J Postgrad Med* 2004; 50: 115-7.
3. Skoutelis A, Panagopoulos C, Kalfarentzos F, Bassaris H. Intramural gastric actinomycosis. *South Med J* 1995; 88: 647-50. [\[CrossRef\]](#)
4. Lee YM, Law WL, Chu KW. Abdominal actinomycosis. *ANZ J Surg* 2001; 71: 261-3. [\[CrossRef\]](#)
5. Choi MM, Beak JH, Lee JN, Park S, Lee WS. Clinical features of abdominopelvic actinomycosis: report of twenty cases and literature review. *Yonsei Med J* 2009; 50: 555-9. [\[CrossRef\]](#)