

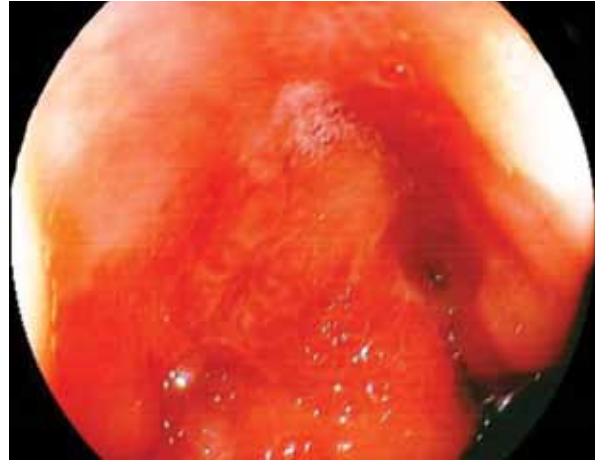


## Laparoscopic resection of signet ring cell gastric cancer resembling infiltrating subepithelial tumor

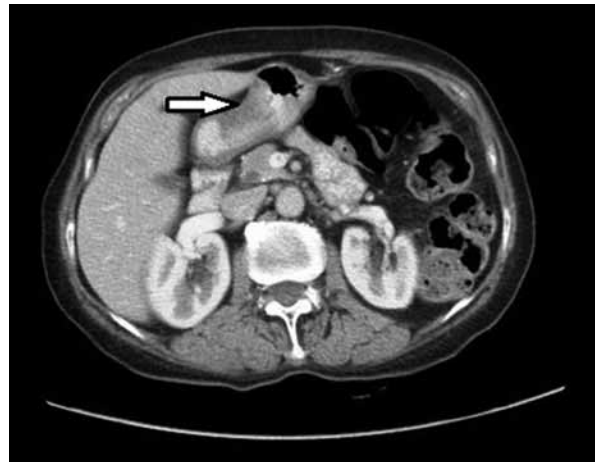
To the Editor,

Gastric cancers exhibit different gross appearances, ranging from well-defined protuberant to diffuse infiltrating tumors (1). Multiple biopsies, usually 6 or more, are required to minimize the false-negative rate. However, endoscopy alone does not allow sufficient histopathologic diagnosis of submucosal tumors of the stomach. We present a case of signet ring cell gastric cancer that was not obtained by histopathological diagnosis by multiple endoscopic biopsies.

A 64-year-old woman was admitted to our hospital in February 2011 with epigastric discomfort. He had diabetes that was being treated with oral hypoglycemic agents. At the initial endoscopy, a 2-cm hyperemic area surrounded by mild edema was found (Figure 1). Initial biopsy specimens were negative for any neoplastic formation. Follow-up endoscopy with multiple biopsies was performed 2 months later after the first endoscopy. However, the multiple biopsy specimens were not diagnosed histologically as malignant. Computed tomography (CT) of the upper abdomen showed diffuse and irregular thickening of the gastric antrum without pathological findings of adjacent fat plans (Figure 2). In the multidisciplinary council, the patient was discussed, and surgery was suggested because of suspicion of malignancy. Laparoscopic subtotal gastrectomy with antecolic gastrojejunal anastomosis was performed. There were no postoperative complications, and the patient was discharged on postoperative Day 5. Histopathologic examination showed signet ring cell gastric carcinoma (Figure 3). Lymph node metastases were found on pathological examination (2/27). She received postoperative chemoradiotherapy, and no sign of recurrence or metastases were seen on any examination 13 months after surgery.



**Figure 1.** First endoscopy revealed a 2-cm hyperemic area surrounded by mild edema.



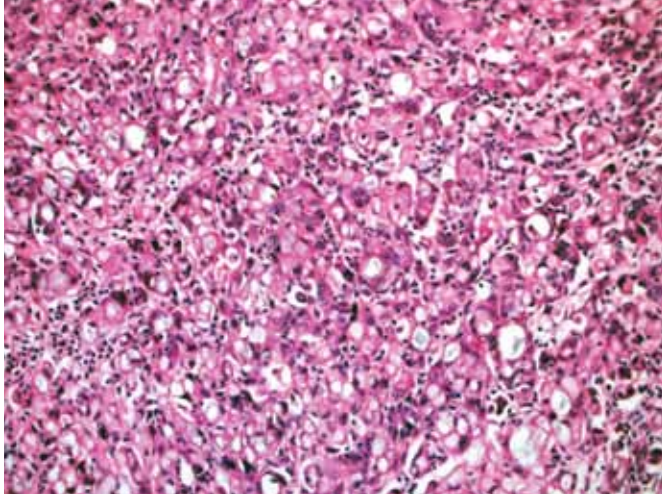
**Figure 2.** Abdominal CT shows gastric wall thickening.

Gastric cancers resembling subepithelial tumors are very rare (2,3). Most subepithelial gastric tumors do not cause symptoms and are incidentally diagnosed during endoscopy, radiologic examinations, or laparotomy (4). However, tumors that are large or ulcerated may cause abdominal pain, gastrointestinal bleeding, or obstructive symptoms (2). Definitive diagnostic investigation

**Address for Correspondence:** Abdulkadir Bedirli, Department of General Surgery, Gazi University Faculty of Medicine, Ankara, Turkey  
E-mail: bedirli@gazi.edu.tr

**Received:** 4.4.2012 **Accepted:** 11.8.2012

© Copyright 2014 by The Turkish Society of Gastroenterology • Available online at [www.turkjgastroenterol.org](http://www.turkjgastroenterol.org) • DOI: 10.5152/tjg.2014.3437



**Figure 3.** A poorly differentiated adenocarcinoma with numerous single cells with cytoplasmic mucin pertaining to signet ring cell morphology. Hematoxylen and eosin stain, magnification: x200.

in gastric tumors begins with upper endoscopy, as >90% of cases will be diagnosed in this manner. However, endoscopy does not allow accurate diagnosis of subepithelial tumors. In these lesions, the overlying mucosa usually appears smooth and normal on endoscopy. Sometimes, a repeat endoscopy is needed if findings from prior endoscopies are unclear. More recently, multidetector CT has allowed us to determine whether a gastrointestinal mass is of epithelial or subepithelial origin (5). Furthermore, the full extent of tumors can be delineated, and local invasion and distant metastases can be identified. In spite of repeated multiple biopsies, no pathological diagnosis was obtained before surgery in this case. Patients who have doubts over the malignancy like this patient should have surgery without losing time. For these patients, laparoscopic surgery is an important option.

In conclusion, we report a patient with a doubt of gastric malignancy, who subsequently received laparoscopic curative resection. The present case emphasizes the importance of careful evaluation of subepithelial gastric tumors. Although gastric

## Bedirli et al. Gastric cancer resembling subepithelial tumor

cancers resembling infiltrating subepithelial tumors are very rare, it may be worthwhile to make a diagnosis and give treatment using minimally invasive surgery.

**Ethics Committee Approval:** N/A.

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

**Peer-review:** Externally peer-reviewed.

**Author contributions:** Concept - A.B., A.A.; Design - A.B., M.İ.; Supervision - Ö.E.; Resource - M.İ.; Materials - M.İ., Ö.E.; Data Collection&/or Processing - A.A.; Analysis&/or Interpretation - A.B., A.A.; Literature Search - A.A., M.İ.; Writing - A.B., A.A.; Critical Reviews - M.İ.

**Conflict of Interest:** No conflict of interest was declared by the authors.

**Financial Disclosure:** The authors declared that this study has received no financial support.

**Abdulkadir Bedirli<sup>1</sup>, Mehmet İbiş<sup>2</sup>, Arzu Alkan<sup>1</sup>, Özgür Ekinci<sup>3</sup>**

<sup>1</sup>Department of General Surgery, Gazi University Faculty of Medicine, Ankara, Turkey

<sup>2</sup>Department of Gastroenterology, Gazi University Faculty of Medicine, Ankara, Turkey

<sup>3</sup>Department of Pathology, Gazi University Faculty of Medicine, Ankara, Turkey

## REFERENCES

1. McLoughlin JM. Adenocarcinoma of the stomach: A review. *Proc (Bayl Univ Med Cent)* 2004; 17: 391-9.
2. Nasu J, Hori S, Asagi A, et al. A case of small undifferentiated intramucosal gastric cancer with lymph node metastasis. *Gastric Cancer* 2010; 13: 264-6. [\[CrossRef\]](#)
3. Teraishi F, Uno F, Kagawa S, Fujiwara T, Gouchi A, Tanaka N. Advanced gastric adenocarcinoma mimicking a submucosal tumor. *Endoscopy* 2007; 39 Suppl 1: E191-2. [\[CrossRef\]](#)
4. Hwang JH, Kimmey MB. The incidental upper gastrointestinal subepithelial mass. *Gastroenterology* 2004; 126: 301-7. [\[CrossRef\]](#)
5. Lee NK, Kim S, Kim GH, et al. Hypervascular subepithelial gastrointestinal masses: CT-pathologic correlation. *Radiographics* 2010; 30: 1915-34. [\[CrossRef\]](#)