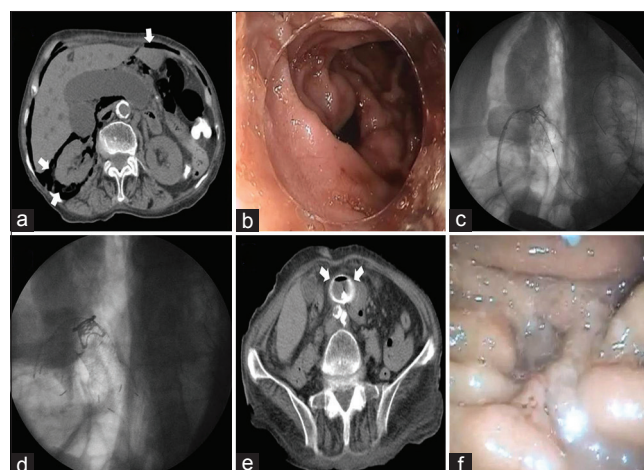


## Closure of echoendoscope-related duodenal free wall perforation by placement of a covered metallic stent

Dear Editor,

An eighty-two year-old female patient was admitted to our clinic with complaints of jaundice and weight loss. Due to suspicion of the periampullary tumor, endoscopic ultrasonography (EUS) was performed. During EUS, it was seen that postbulbar area of the duodenum was narrowed and angulated; passage of echoendoscope through this area was difficult. Due to rapid deterioration of patient's vital signs, the EUS was terminated early without adequate evaluation of the periampullary region. Approximately 2 h later, computed tomography (CT) was performed because of severe abdominal pain. On CT scan, intra- and retro-peritoneal air was seen without fluid collection [Figure 1a]. Endoscopic examination was performed with forward-view endoscope, and a perforation with a diameter of 2.5 cm was observed at the inferior part of the postbulbar area [Figure 1b]. Due to her age, poor medical condition, and high suspicion of malignancy, the patient was not considered a surgical candidate. Initially, over-the-scope-clip was tried but it failed to close the defect because of angulation and larger size. A 80 cm × 20 mm fully covered self-expandable metallic duodenal stent (FCSEMS) was placed through the perforation site under the fluoroscopic condition [Figure 1c and d]. She was treated with total parenteral nutrition for 6 weeks and broad-spectrum antibiotics for 3 weeks, and also repeat-CT examinations were performed during the follow-up period. Acute cholangitis was developed at 2<sup>nd</sup> week, and external biliary drainage was applied through percutaneous transhepatic way. At 6<sup>th</sup> week, the CT findings were completely resolved [Figure 1e] and FCSEMS was extracted endoscopically and it was observed that, the perforation site was obliterated [Figure 1f].

Albeit the use of FCSEMS is widely recommended as one of the endoscopic treatment options as an expert



**Figure 1.** (a) Computed tomography scan showing the presence of air in the intra- and retro-peritoneal space (arrows) (b) Image on endoscopic examination was performed with forward-view endoscope and perforation site measuring 2.5 cm in diameter was seen at the inferior part of the postbulbar area. (c) Image while the FCSEMS is opening; in addition, free gas in the retroperitoneal space and over-the-scope clip are seen. (d) The FCSEMS is placed through the perforation site. (e) At 6<sup>th</sup> week, the computed tomography findings were completely resolved. In addition, FCSEMS is seen (arrows). (f) The perforation site was obliterated at the 6<sup>th</sup> week of the procedure after the displacement of FCSEMS. FCSEMS: Fully covered self-expandable metallic duodenal stent

opinion in iatrogenic endoscope-related duodenal free wall perforations,<sup>[1-4]</sup> this is the first reported case with echoendoscope-related duodenal free wall perforation who had been successfully treated by placement of covered metallic stent.

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### *Conflicts of interest*

There are no conflicts of interest.

**Selçuk Dişibeyaz, Erkin Öztaş, Ufuk Barış Kuzu, Mustafa Özdemir<sup>1</sup>**

Departments of Gastroenterology and <sup>1</sup>Radiology, Türkiye Yüksek İhtisas Eğitim ve Araştırma Hastanesi Gastroenteroloji Servisi, Kızılay SK. No: 4 Sıhhiye Altındağ, Ankara, Turkey

### **Address for correspondence**

Dr. Ufuk Barış Kuzu, Ankara Yüksek İhtisas Eğitim ve Araştırma Hastanesi Gastroenteroloji Servisi, Kızılay SK. No: 4 Sıhhiye Altındağ, Ankara, Turkey.

E-mail: ubarisk@gmail.com

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