

Portal venous air embolization

Portal venöz hava embolizasyonu

To the Editor

A 74-year-old lady was diagnosed with an inoperable gallbladder carcinoma with peritoneal deposits and acute cholangitis. As a palliative procedure, the patient was taken up for endoscopic retrograde cholangiopancreatography (ERCP) which was performed under conscious sedation with the patient placed in a semi-prone position. 7F-biliary stents were successfully placed in the bile duct, however, note was made of inadvertent air entry into the portal vein. Spot-radiograph taken with the patient in semi-prone position (Figure-1) reveals an iatrogenic pneumovenogram (arrows). The procedure was immediately abandoned, and high-flow supplemental oxygen was administered after placing the patient in a Trendelenburg position. The patient fortunately remained stable with steady vital parameters during and post-procedure (BP: 130/86 mm of Hg, pulse-rate: 70 per minute, and respiratory rate: 16 per minute). She was kept under strict surveillance, and her symptoms of cholangitis rapidly improved following which she was discharged on post-procedure day 4.

Portal vein air embolization is a rare, potentially fatal, complication of ERCP. Although many of these cases go unnoticed with no grave consequences, the entity remains potentially fatal (1-3). The proposed mechanism of venous air embolization is dissection of insufflated air through the inadvertently injured duodenal wall. The air via the venous duodenal radicles gains access into the mesenteric circulation and the portal vein (3). Another probable mechanism is the creation of a biliary-vascular fistula wherein insufflated air through an already weakened biliary radicle escapes into the portal vein branch (1). The outcomes chiefly depend upon the amount and the rate at which the air is insufflated (1). Small volumes of air in the venous system can get absorbed spontaneously (2). However, larger quantity or rapid rate-of-delivery can lead to systemic (cerebral or pulmonary)



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Figure 1. Spot-radiograph shows the patient in semi-prone position reveals an iatrogenic pneumovenogram.

embolism with catastrophic consequences in the form of arrhythmia, acute cor pulmonale, asystole, hypoxia, shock, stroke, or sudden death (1-3). The lack of clinical suspicion frequently adds to the clinical quandary. Awareness of such a possibility and high index of clinical suspicion is required to prompt suitable investigations and commence appropriate therapy (1-3). Any suggestion of venous air embolization during ERCP should instigate instantaneous termination of the procedure (1). The therapeutic options depend on the severity of air embolism and range from hyperbaric oxygen therapy, high-flow oxygen supplementation, patient repositioning (left lateral decubitus and Trendelenburg positions), closed chest cardiac massage, to aspiration of air from the right ventricle through an acutely floated pulmonary artery catheter (2).

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REFERENCES

1. Romberg C. Systemic air embolism after ERCP: a case report and review of the literature (with video). *Gastrointest Endosc* 2009; 70:1043-5.
2. Rajendiran G, Rathore S, Sidhu G, Catevenis J. Iatrogenic hepatic pneumovenogram. *Crit Care Res Pract* 2011; 2011: 731758. Epub 2011 May 18.
3. Bisceglia M, Simeone A, Forlano R, et al. Fatal systemic venous air embolism during endoscopic retrograde cholangiopancreatography. *Adv Anat Pathol* 2009; 16:255-62.

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Successful treatment of postpolypectomy colonic hemorrhage with a combination of hemoclip and endoscopic band ligation

Kolonik postpolipektomi kanamasının hemoklip ve endoskopik bant ligasyonu ile başarılı tedavisi

To the Editor

Approximately 1% of colonoscopic polypectomies results in hemorrhage (1). The risk of hemorrhage is higher particularly in polyps located in the right colon, larger than 2 cm, of sessile type, and with thick stalk. Moreover, the risk is also increased in patients that are on antiaggregants or anticoagulants (2, 3). In endoscopic treatment of postpolypectomy hemorrhage, some methods as epinephrine injection, thermal coagulation, hemoclip, or combination of these methods are used, as in the treatment of peptic ulcers (4). Here, we present a case of postpolypectomy hemorrhage that was successfully treated with a non-standard treatment approach which involved a combined method of band ligation by the use of hemoclips and band ligation. To the best of our knowledge, no case of this kind has been presented in the literature to date.

A 65-year-old female patient was admitted to our outpatient clinic with the complaint of constipation. The colonoscopic evaluation of the patient revealed a wide-based polyp of 1 cm in diameter at the 15th cm of the rectum. After submucosal lifting of the base of the polyp using saline, polypectomy was performed with a polypectomy snare. After polypectomy, pulsating hemorrhage was noted on

the base of the polyp. Two hemoclips were set on the upper and lower edges of the mucosa for hemostasis. Because of sustained hemorrhage, a single rubber band was placed on the area of he-

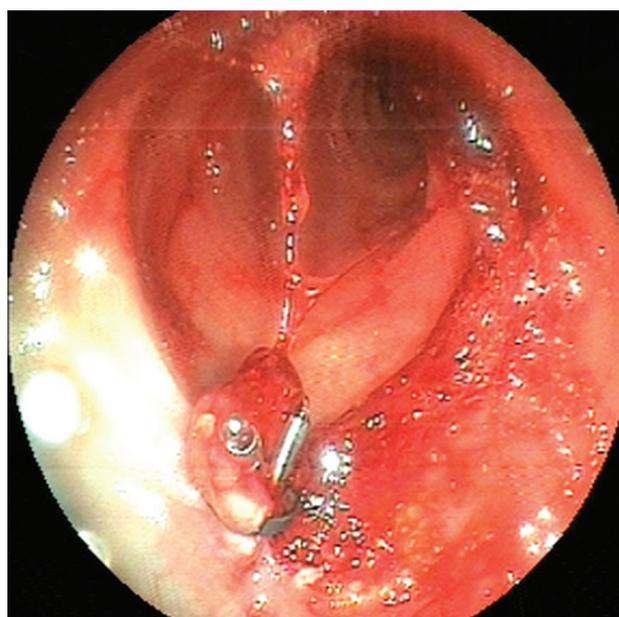


Figure 1. A single rubber band placed at the area of hemorrhage in a manner to keep the hemoclips fixed.

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