

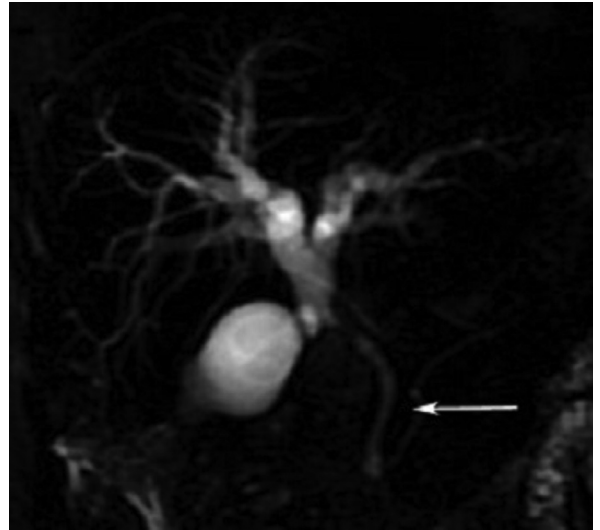


## Intramural hematoma of the esophagus: An unusual complication of endoscopic retrograde cholangiopancreatography

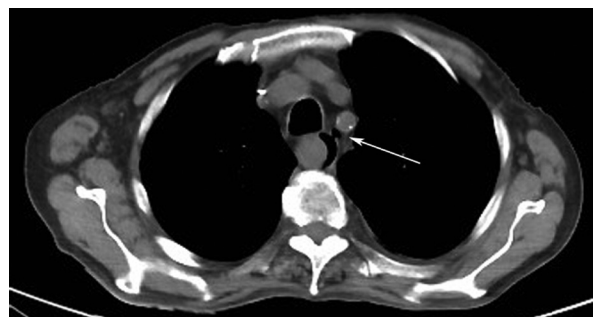
To the Editor,

A 84-year-old male was referred to our Unit for jaundice (serum bilirubin value of 2.8 mg/dL). He was not taking anticoagulant/antiplatelet agents. A magnetic resonance cholangiography revealed a neoplastic stricture of the main bile duct (Figure 1). He underwent endoscopic retrograde cholangiopancreatography (ERCP) using a side-viewing endoscope after obtaining the informed consent. Soon after we introduced the duodenoscope into the upper esophagus, we noted discoloration of the mucosa starting from the cricopharyngeal sphincter. We stopped the procedure and inserted a nasogastric tube. Chest computed tomography (CT) revealed diffuse esophageal wall thickening (>1 cm), mimicking a double lumen and minimal signs of pneumomediastinum (Figure 2). Gastroscopy using CO<sub>2</sub> revealed a blue mass bulging into the esophageal lumen (Figure 3) but no visible tearing of the esophageal wall. Except for the first two days in which the patient had a chest pain and a mild neutrophilic leukocytosis, for the rest of the time, he was asymptomatic with normal laboratory exams. We managed his condition conservatively (bowel rest, parenteral nutrition, intravenous broad-spectrum antibiotics, and proton-pump inhibitors). Three days later, CT showed resolution of the pneumomediastinum. The closure of the esophageal perforation was confirmed by an esophagogram with the contrast agent diatrizoic acid (Gastrografin) (Figure 4) and the complete resolution of the hematoma by CT performed 7 days after the esophagogram. The patient underwent radiological percutaneous treatment using an expandable metallic stent in the main bile duct (10 mm×94 mm, Wallstent®; Boston Scientific Corp.; Natick, Massachusetts, USA) (Figure 5), recovered well, and was discharged three days later.

Intramural esophageal hematoma (IHE) is a rare and potentially life-threatening condition (1). This is characterized by a submucosal hemorrhage leading to a hematoma (2). In most of the cases, IHE can be spontaneous, especially in patients under anticoagulant/antiplatelet



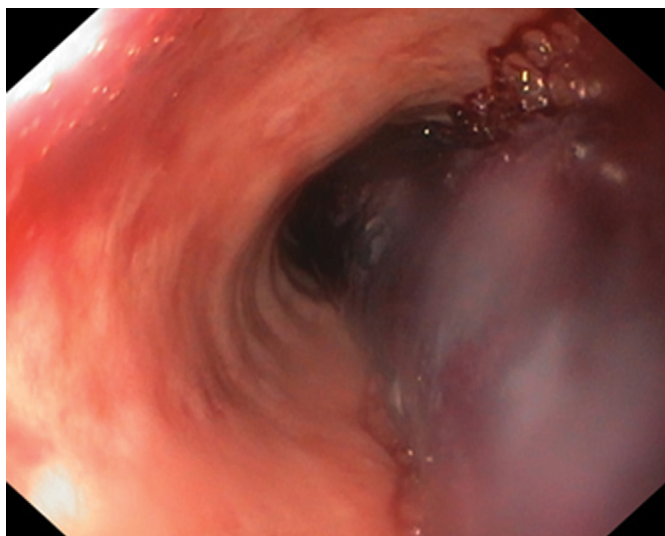
**Figure 1.** Magnetic resonance cholangiography revealed a neoplastic stricture of the main bile duct (white arrow) with marked proximal bile duct dilatation



**Figure 2.** Chest computed tomography showed both a "double lumen" of the esophagus and the presence of minimal free air in the mediastinum (white arrow)

agents; but in some cases, it can be caused by emesis, trauma, foreign bodies, aortic disease abnormal hemostasis, and iatrogenic damage as endoscopic procedures (2). While in the literature are described some case of esophageal perforation due to ERCP (3), according to our opinion, this is the first case of an intramural esophageal hematoma occurred during this kind of procedure.

This case highlights that IHE can be a complication of ERCP and that the patients can be treated conservatively.



**Figure 3.** Gastroscopy disclosed a blue mass bulging along all the esophageal lumen



**Figure 4 a–c.** A series of X-ray images (a, b, c) of the esophagus, after have taken Gastrografin, showed no spreading of the contrast medium of the esophageal wall

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**Ethics Committee Approval:** Ethics committee approval was received for this study from the ethics committee of Sandro Pertini Hospital.

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

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



**Figure 5.** Expandable metallic stent in the main bile duct (white arrow) placed with percutaneous radiologic approach

**Author Contributions:** Supervision - M.Z.; Materials - G.T.; Data Collection and/or Processing - W.H.; Analysis and/or Interpretation - W.H.; Literature Review - G.T.; Writer - M.Z.; Critical Review G.T., M.Z.

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