Tension pneumoperitoneum following endoscopic submucosal dissection of leiomyoma of the cardia

A 39-year-old woman underwent video esophagography with barium because of persistent heartburn and regurgitation. A smooth defect with eccentric contours, about 2 × 3 cm in size, was found at the esophagogastric junction. Upper gastrointestinal endoscopy confirmed the presence of a soft, polypoid, submucosal mass surrounding the cardia. Endoscopic ultrasonography showed a hypoechogenic, C-shaped lesion originating from the muscularis propria, with a fine echotexture consistent with leiomyoma. No biopsy was taken. The patient was considered a good candidate for endoscopic submucosal resection. The procedure was performed under general anesthesia with the patient in the supine position. A standard 9-mm endoscope with a soft transparent hood attached to its tip was advanced through an overtube into the stomach and then retroflexed. Enucleation was carried out after submucosal injection of 10 mL of diluted epinephrine using an insulated tip diathermic electrosurgical knife (IT-Knife 2; Olympus, Tokyo, Japan) at 100 W and a hook knife (Olympus Optical, Tokyo, Japan) at 60 W. The dissection started along the lower border of the lesion and then extended circumferentially. Once the submucosal layer was reached, the tumor was gradually dissected away from the muscular layer and removed with an endoscopic bag. En bloc resection was achieved and the mucosal margins were sutured using three endoscopic clips. The procedure lasted 170 minutes. Histological examination confirmed the diagnosis of leiomyoma.

Postoperatively, the patient complained of severe, persistent abdominal pain unrelied by analgesics and nasogastric intubation. A plain film of the abdomen revealed generalized distension and tenderness of the abdomen, tachycardia, and mild hypotension. A plain film of the abdomen showed free air in the peritoneal cavity probably related to an air leak through the intact gastric wall (Fig. 1). Paracentesis was performed for decompression using a 20-gauge needle catheter. The patient recovered uneventfully after aspiration of about 3 L of air from the peritoneal cavity, and was discharged on postoperative day 3.

Endoscopic submucosal enucleation of tumors of the esophagogastric junction is a safe and effective technique in experienced hands. Overt perforation can occur, mainly on the gastric side, and can be managed by immediate clip application [1]. To our knowledge, this is the first reported case of tension pneumoperitoneum occurring after endoscopic submu...

Figure 1: Plain film of the abdomen taken two hours after the endoscopic procedure showing pneumoperitoneum (arrows).

Competing interests: None

References

Bibliography
Endoscopy 2010; 42: E152
© Georg Thieme Verlag KG Stuttgart - New York - ISSN 0013-726X

Corresponding author
L. Bonavina
U.O. Chirurgia Generale
IRCCS Policlinico San Donato
Piazza Malan 2
20097 San Donato Milanese
Milan, Italy
Fax: +39-02-52774622
luigi.bonavina@unimi.it