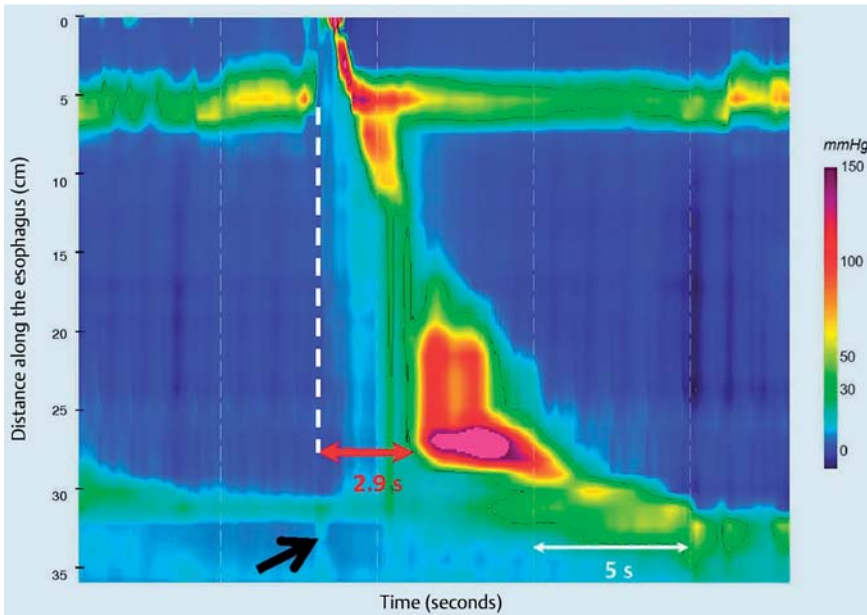


## Fatal mediastinitis following botulinum toxin injection for esophageal spasm



**Fig. 1** Premature contraction, defined as a distal latency shorter than 4.5 seconds (double-headed red arrow). The black arrow indicates the complete relaxation of the lower esophageal sphincter during swallowing. This appearance is typical of distal esophageal spasm in high resolution manometry.



**Fig. 2** Thoracic CT scan showing the mediastinal abscess between the esophagus and the aorta (white arrow), and a bilateral pleural effusion (black arrows).

Endoscopic injection of botulinum toxin (BTX) may be used to treat achalasia or distal esophageal spasm [1–3]. We report a case of fatal mediastinitis following this treatment.

A 64-year-old man with dysphagia caused by distal esophageal spasm as defined by the Chicago classification [4] (● Fig. 1) was treated by BTX injection into the distal esophagus in accordance with Storr et al.

[2]. The procedure was uneventful. Seven days later, the patient was admitted to the emergency department, where CT scan revealed mediastinitis with a para-esophageal abscess (● Fig. 2). Surgical excision of the mediastinal abscess was performed 10 days after the BTX injection because of persistent fever despite intravenous antibiotics. *Streptococcus anginosus* was identified in the mediastinal biological sam-

ples. The patient's condition improved, but sudden hemorrhagic shock occurred 23 days after BTX. Thoracotomy revealed aortic hemorrhage secondary to mycotic aneurysm. The patient died during the surgical management.

BTX injection into the esophageal wall has been evaluated in the treatment of non-achalasia primary esophageal motility disorders [1–3]. It is known as an easy endoscopic technique which does not require a steep learning curve and can be performed in nonspecialist centers; it is also known as safe [5]. However, we have found three case reports pointing out the potential infectious risks related to this procedure. MacIver et al. reported a case of severe mediastinitis following BTX injection for achalasia [6]. Surgical thoracotomy revealed necrotic tissue surrounding the esophagus above the esophagogastric junction without evidence of perforation. Eaker et al. reported a case of esophageal ulceration following BTX administration, and evidence of extra-esophageal inflammation at subsequent surgical myotomy [7]. Finally, Radaelli et al. described a case of transient acute gastroduodenal dilation after BTX injection for achalasia, followed by severe sepsis related to subdiaphragmatic abscesses [8].

Esophageal BTX injection should not be considered as a riskless procedure, as evidenced by this case of fatal mediastinitis occurring in a 64-year-old patient without significant co-morbidities.

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