Use of cyanoacrylate to treat mucosal perforations during or after peroral endoscopic myotomy

Peroral endoscopic myotomy (POEM) is a safe and effective procedure for patients with achalasia [1]. Mucosal perforation is an inadvertent complication that is difficult or impossible to treat with standard clips [2]. Over-the-scope clips, endoluminal suturing devices, and fully covered stents have been used successfully [3, 4]. Cyanoacrylate is used as a sealant because of its rapid solidification rate [5]. We report on three patients who were treated successfully with cyanoacrylate following failure of standard closure.

Case 1: a 26-year-old woman underwent an uncomplicated POEM procedure but presented nausea, vomiting, and tachycardia 48 hours later. On endoscopy, a wide mucosal injury was found at the esophagogastric junction and 3 cm below. Conventional closure of the mucosal defect was unsuccessful. Therefore, 2 mL of cyanoacrylate was applied successfully. Endoscopy 8 months later showed only a small scar at the site.

Case 2: a 51-year-old woman underwent POEM and showed contrast leak into the submucosal tunnel 24 hours after the procedure. The clips could not be rearranged to close the defect, and 2 mL of cyanoacrylate was applied successfully. Endoscopy confirmed normal mucosal healing.

Case 3: a 40-year-old man underwent a difficult POEM procedure owing to the presence of submucosal fibrosis. He showed tearing of the mucosal entry site, which could not be closed with clips. Therefore, 3 mL of cyanoacrylate was applied successfully. The patient was discharged 48 hours later without complications.

This is the first report of the use of cyanoacrylate glue to seal mucosal perforations following peroral endoscopic myotomy. Conventional closure of the entry site with clips was performed. Esophagram 24 hours later showed contrast leaking into the submucosal tunnel at the level of the entry site. Conventional closure of this mucosal defect was unsuccessful. Cyanoacrylate was applied into the tunnel. No leak was observed on the subsequent esophagogram. Endoscopy 1 month later showed adequate healing.

Video 1
Cyanoacrylate use to seal mucosal perforations following peroral endoscopic myotomy. Conventional closure of the entry site with clips was performed. Esophagram 24 hours later showed contrast leaking into the submucosal tunnel at the level of the entry site. Conventional closure of this mucosal defect was unsuccessful. Cyanoacrylate was applied into the tunnel. No leak was observed on the subsequent esophagogram. Endoscopy 1 month later showed adequate healing.
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Competing interests: None

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References

Bibliography
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