
Cylinder Implantation – A New Method for Endoscopic Treatment of Anastomotic Dehiscence

Mediastinal anastomotic leaks after surgery on the upper gastrointestinal tract are highly prevalent complications, occurring in 5–15% of cases, with a mortality of about 60% [1]. Endoscopic techniques are increasingly used for the treatment of partially insufficient anastomoses. The procedure consists of endoscopic drainage, lavage and wound closure using fibrin glue [2]. This report describes an additional implantation of a Vicryl cylinder into the fistula.

A 61-year-old man with an intestinal-type adenocarcinoma at the gastroesophageal junction underwent resection and intrathoracic, circular-stapled esophagogastrostomy. A dehiscence of 1 × 2 cm and a mediastinal abscess 3 × 6 cm in size were diagnosed by means of esophagoscopy, contrast study, and CT on the fifth postoperative day. CT-controlled percutaneous drainage using a pigtail catheter was performed. The dehiscence was endoscopically cleaned three times at two-day intervals. Afterwards, 2 ml of fibrin glue were injected into the submucosa on the fistula site. This procedure was repeated on three subsequent days, resulting in a decline in the size of the dehiscence. A Vicryl cylinder about 8–10 mm in diameter was implanted by endoscopy (Figures 1 and 2). Immediately

after implantation, the patient became afebrile. The external pigtail drain was removed on the 15th postoperative day. Oral nutrition was started three days after the leak closure, and the patient was discharged 22 days after the esophagogastrostomy. Two months later, the anastomosis was regularly epithelialized and histological findings confirmed regular granulation tissue. The patient has now been asymptomatic for one year.

The endoscopic treatment of partially insufficient anastomoses is a successful therapeutic option [3,4]. The additional implantation of a Vicryl cylinder provides, as described here, safe and fast closure of the fistula. The material of the cylinder is resorbable, and has been extensively clinically tested [5]. We suggest that the combination of fibrin glue and liquid synthetic material, which polymerizes after application and is subsequently resorbed, is likely to be a convenient option for the treatment of partial anastomotic dehiscences in the upper gastrointestinal tract.

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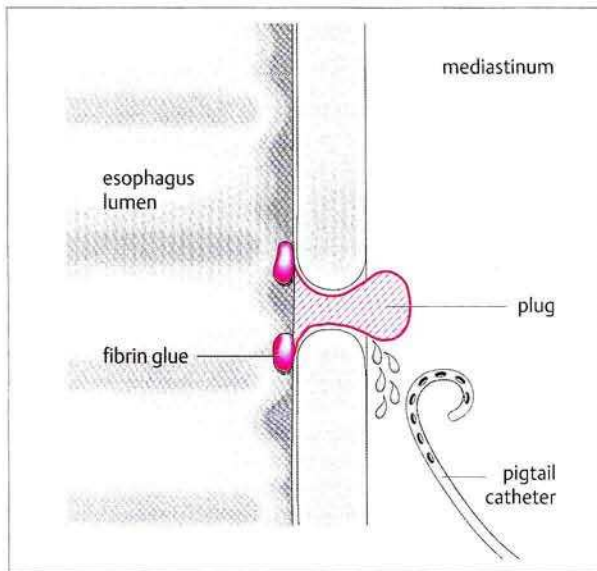


Figure 1 Diagram of the cylinder (length 16 mm, diameter 8 mm) plugging the fistula. The mediastinum is drained by a pigtail catheter. The luminal surface of the cylinder was sealed with fibrin.



Figure 2 Endoscopic image of the implanted cylinder

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