

Infectious Abscess as Complication of Steroid Injection With Dilation of Refractory Upper Gastrointestinal Strictures

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ABSTRACT

Benign, refractory upper gastrointestinal strictures can be challenging to treat. Dilation combined with intralesional steroid injection is part of treatment algorithms. This intervention is typically well-tolerated, and few complications of this technique have been reported in the literature. We report 2 patients with infectious abscesses, 1 involving the neck and 1 involving the pylorus, as a complication of steroid injection and dilation of refractory strictures.

INTRODUCTION

Dilation combined with intralesional steroid injection is part of treatment algorithms for refractory upper gastrointestinal strictures.^{1,2} Few complications of this technique have been reported.³ We report 2 patients with infectious abscesses as a complication of steroid injection and dilation for benign, refractory upper gastrointestinal strictures.

CASE REPORT

Patient 1: A 71-year-old woman with gastroesophageal reflux disease, nonsteroidal anti-inflammatory drug use, Sjogren syndrome on azathioprine, and refractory proximal esophageal stricture underwent her first intralesional steroid injection (triamcinolone 80 mg) combined with Savary dilation to 12.8 mm. She had 22 previous dilations over 7 years without complication. The patient developed odynophagia 5 days later and was treated with topical and systemic analgesia. She developed neck swelling 11 days after the procedure and was found on computed tomography to have bilateral neck abscesses (Figure 1). She was admitted to the intensive care unit and treated with abscess aspiration, parenteral antibiotics, and nasogastric tube feeding. She was discharged with oral antibiotics and a soft diet on hospital day 7. She was readmitted with abscess recurrence 13 days later, and parenteral antibiotics and tube feeding were resumed. Otolaryngology performed laryngoscopy, neck exploration, and abscess drainage with drain placement. Esophagram demonstrated no perforation, and the patient was discharged on a soft diet along with oral antibiotics. She has subsequently resumed serial dilations without steroid injection.

Patient 2: A 70-year-old woman with active tobacco use and peptic ulcer disease because of nonsteroidal anti-inflammatory drugs complicated by refractory pyloric stenosis developed worsening epigastric pain and intractable nausea 6 weeks after her ninth intralesional steroid injection (triamcinolone 80 mg) combined with balloon dilation to 20 mm. A computed tomography showed small abscesses in the pyloric wall (Figure 2). She was hospitalized and managed with parenteral antibiotics and discharged on hospital day 3 with oral antibiotics. She continues to have her pyloric stenosis managed with serial dilations without steroid injection.

DISCUSSION

Benign esophageal gastrointestinal strictures are defined as refractory when an esophageal lumen diameter of 14 mm cannot be maintained over 5 sessions at 2-week intervals.⁴ Steroid injection combined with dilation is a useful therapeutic option for refractory

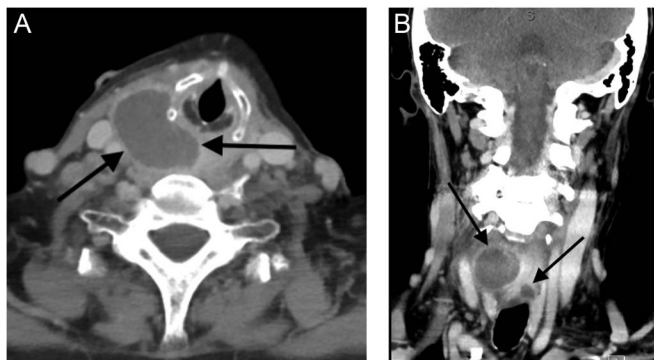


Figure 1. (A) Axial and (B) coronal neck computed tomography with intravenous contrast showing bilateral abscesses.

upper gastrointestinal strictures and is a part of treatment algorithms when dilation alone is ineffective.¹ The technique involves intramucosal injections of triamcinolone acetonide (40–80 mg divided into aliquots) performed either before or after endoscopic dilation. The injections may be in 3–4 quadrants and into the mucosal defect if performed after dilation. The theorized mechanism is inhibition of the inflammatory response at the site of mucosal disruption, thereby reducing collagen formation, fibrosis, and scarring, thus increasing stricture compliance and luminal diameter.⁵ Contraindications to this intervention include active infection at the site of lesion (eg, herpes simplex virus, cytomegalovirus, and *Candida*), allergy to triamcinolone, and usual contraindications to endoscopy with dilation alone (eg, bleeding diathesis and anticoagulant use). Few infrequent complications of this technique have been reported and include candida esophagitis, submucosal laceration, hemorrhage, and perforation.⁶

Abscess development has not been previously reported as a complication of this procedure. We report 2 patients with

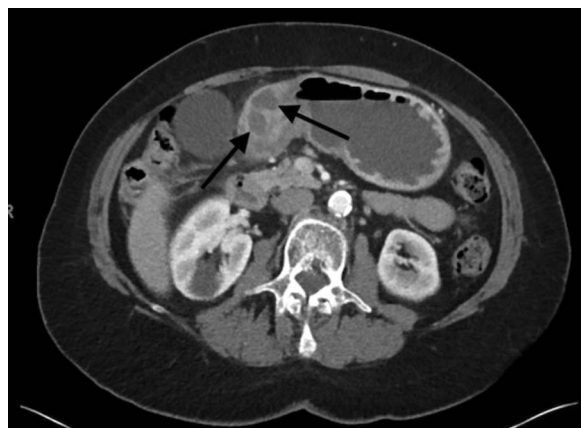


Figure 2. Abdominal computed tomography with intravenous contrast in the axial view showing small pyloric abscesses.

infectious abscesses as a complication of steroid injection and dilation for benign, refractory upper gastrointestinal strictures. Given the proposed mechanism of action of inhibiting the local inflammatory response to decrease stricture reformation, it then follows that patients may be at increased risk of local infection from the tissue disruption combined with the anti-inflammatory intervention. The first case may also be confounded by the patient's long-term use of azathioprine, making her more susceptible to infection. However, the patient had previously undergone 22 uncomplicated dilations, leading us to suspect the steroid injection to be the major cause of abscess formation rather than the azathioprine use. Endoscopists should be aware of the possibility of this significant complication when assessing patients with delayed postprocedural symptoms after dilation with steroid injection.

DISCLOSURES

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Informed consent was obtained for this case report.

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