

## Short Communication

# The role of endoscopic stapling diverticulotomy in recurrent pharyngeal pouch

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### Abstract

Endoscopic stapling diverticulotomy is an increasingly popular treatment option for pharyngeal pouch. It has been our treatment of choice for the condition for over three years. Of the over 50 cases treated using the technique, three were performed for recurrent pouches – two following previous endoscopic stapling diverticulotomy and one following previous external excision. We describe these three cases to highlight the advantages and effectiveness of the technique in recurrence cases.

**Key words:** Hypopharyngeal diverticulum, surgery; Endoscopy

### Introduction

Since endoscopic stapling diverticulotomy was first described by Martin-Hirsch and Newbegin (1993) and Collard *et al.* (1993), it has rapidly become an increasingly popular treatment option for pharyngeal pouch (Koay *et al.*, 1997). The technique has the attraction of being effective, quick, minimally invasive and is ideally suited for elderly patients (Bates and Koay; 1996; Koay and Bates, 1996). In our experience, it also has the added advantage of being readily repeatable for recurrence cases following previous procedures. We describe three cases in which the technique was used for recurrent pharyngeal pouches.

### Case reports

#### Case 1

An 82-year-old woman was referred with a two-day history of complete dysphagia. She had a history of pharyngeal pouch which had been treated five months previously by another surgeon using the endoscopic stapling technique. She was able to resume a normal diet immediately following the procedure and had remained well until presenting to us with a recurrence of dysphagia.

An urgent gastrograffin swallow was performed which confirmed the presence of a residual pharyngeal pouch. The patient therefore underwent a revision endoscopic stapling of the pouch which was found to be completely filled with meat boluses. These were cleared and the residual septum was divided and stapled down to the level of the fundus of the pouch. The patient was able to resume a soft diet again within 24 hours of the operation and returned to a normal diet soon after. She remained asymptomatic nine months later.

#### Case 2

A 75-year-old woman presented with symptoms of dysphagia to solids and regurgitation. A barium swallow confirmed the presence of a pharyngeal pouch. She underwent endoscopic stapling of the pouch. Her symptoms improved post-operatively with no further regurgitation but she was still finding it somewhat difficult to swallow doughy food.

Videofluoroscopic examination showed a residual pouch which emptied rapidly. It was thought that the residual pouch was at least partly responsible for her persistent symptoms. She therefore underwent a revision endoscopic stapling during which the residual septum was divided further down to the level of the fundus of the pouch. Two staplings were required to achieve complete division. Her dysphagia completely resolved and she remained asymptomatic two years later.

#### Case 3

A 79-year-old man who had had an external excision of a pharyngeal pouch 10 years previously presented with a recurrence of his symptoms of dysphagia and regurgitation. He had previously turned down the offer to have a revision external excision of the pouch despite worsening of his symptoms. He was delighted when the option to have the operation done endoscopically was offered. At the operation, a moderately large-sized pouch was found and standard stapling of the septum was performed. His symptoms resolved and he remained asymptomatic two years later.

### Discussion

We have adopted the endoscopic stapling technique as our treatment of choice for pharyngeal pouches since 1994 and have performed over 50 such procedures, including

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the three revision cases described above. Our results show the technique to be quick, effective and carries minimal morbidity making it ideally suited for the elderly patients. The minimally invasive nature of the procedure also provide an additional advantage through the readiness with which a revision stapling could be performed in recurrent pouches.

As in the traditional Dohlman's procedure, the success of the endoscopic stapling technique appears to be related to how completely the diverticular septum is divided (Dohlman and Mattsson, 1960; Van Overbeek and Hoeksema, 1982; Van Overbeek *et al.*, 1984). In our experience, two cartridges of staples are usually required to achieve complete division of the septum. In *Cases 1* and *2* above, only one cartridge of staples was used in the original operation in each case. We felt this might have contributed to the failures. The simultaneous sealing of the cut edges of the septum by the triple staggered role of staples reduces the risk of a leak or fistula formation. However, there is a risk of perforating the pouch by the tip of the stapling gun if it is inserted too far. How much septum can be safely divided is a matter of judgement and is probably related to experience. If in doubt, it is safer to under-divide rather than to over-divide the septum to risk a perforation. As demonstrated by our cases above, residual or recurrence pouches can be readily treated with a revision procedure without any increased morbidity.

Revision surgery through an external approach for a recurrent pharyngeal pouch following previous external excision may give rise to increased morbidity because of the distortion of anatomy from previous surgery. Endoscopic stapling would appear to offer a much safer alternative and we would recommend its use for such cases as demonstrated in *Case 3* above.

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