

Case Report

Laparoscopic cardiomyotomy: one step ahead

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Abstract

Achalasia cardia is treated by cardiomyotomy. This may be performed by thoracoscopy or laparoscopy resulting in less morbidity allowing early discharge. This is a case history of a forty nine year old lady with achalasia, successfully treated by laparoscopic cardiomyotomy.

Key words: Achalasia cardia; Cardiomyotomy; Laparoscopy

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Introduction

Achalasia Cardia is due to increased lower oesophageal sphincter pressure and there is poor peristalsis in the body and the lower oesophagus (1,2,5). Although the etiology remains unclear, it is postulated that it involves the destruction of myenteric plexi (1,2). The symptoms include dysphagia, chest pain, regurgitation and heartburn (1,3,5).

The goal of treatment of achalasia is to relieve functional obstruction in the distal oesophagus and oesophago-gastric junction. A modified Heller's oesophago-cardiomyotomy is considered the standard surgical procedure (1). This may be combined with an anti reflux procedure (1). The surgery may be done by open or minimal access (1,4). Minimal access approach by thoracoscopy or laparoscopy is associated with lower morbidity, early discharge and early return for work.(4) Other modalities of treatment described with varying success rate are pharmacological (Isosorbide-dinitrate, Nifedipine or botulinum toxin) and pneumatic dilatation of the oesophagus (1,2,3). The results of non surgical modalities are not effective as cardiomyotomy (1,3).

We report the case history of a 49 year-old lady diagnosed with achalasia cardia; who underwent a successful laparoscopic cardiomyotomy in the Surgical Unit, Teaching Hospital Peradeniya.

Case presentation

A 49-year-old lady, presented to the Surgical Unit, Teaching Hospital Peradeniya with progressive worsening of difficulty in swallowing for both solids and liquids. Her symptoms were first noticed in early 2004, which gradually worsened. Later even a small sip of water caused dysphagia with immediate nasal and oral regurgitation. She found it difficult to lie flat on the bed which would trigger a cough. She had no loss of appetite, or a significant loss of weight. She neither had a past history of corrosive ingestion.

She underwent an upper gastro intestinal endoscopy. This revealed a dilated oesophagus with tightness distally suggestive of achalasia. There were no mucosal abnormalities. Barium swallow demonstrated the characteristic 'bird beak' appearance.

As this confirmed the diagnosis of achalasia cardia, she was scheduled for surgery. Esophageal manometry was not done as it was not available.

She underwent a Laparoscopic cardiomyotomy under General anaesthesia. Five ports were used consisting of three 5mm ports, one 10 mm port, and a camera port. Once the pneumo-peritoneum was achieved with a CO₂ insufflation pressure of 14 cm H₂O, gastro-oesophageal junction was identified. The gastro-hepatic ligament was divided and the oesophageal hiatus dissected posteriorly identifying both crura. The incision was extended anteriorly completing the hiatal dissection. Both vagi were identified and preserved. Through the hiatus the intra-thoracic oesophagus was mobilized until the dilated segment was reached. Then the myotomy was done until mucosa was exposed. The myotomy was



Figure 1 Barium Study showing the characteristic 'bird beak' appearance

extended 3cm in to the oesophagus and 2cm in to the stomach. The procedure took 120 minutes with no measurable blood loss. The patient was stable through out the procedure.

On the same day she was started on oral sips and a normal diet next day. Her pain was managed with Diclofenac sodium suppositories and oral paracetamol. There were no post operative complications and she was relieved of the dysphagia. She was discharged from hospital on first post operative day.

Discussion

Achalasia of the cardia results from a failure of the lower end of the oesophagus to relax with swallowing (1,2,4,5). The diagnosis is established with upper gastro-intestinal endoscopy, barium swallow and oesophageal manometry.(1,2,4,5).

Management strategies of achalasia have evolved leaps and bounds over the past few decades. In 1913 Heller performed the first oesophago-myotomy which included both anterior and posterior myotomy, where 10 years later Zaaiger modified it by doing single anterior myotomy which demonstrated equal results. The same procedure can be done with minimal access by thoracoscopy or laparoscopy with significantly lower morbidity than open surgery.(4)

A cumulative good to excellent clinical response rate of 94% has been reported for laparoscopic oesophago-cardiomyotomy over a short period of time with more than 80% remaining dysphagia-free at 5 years.(1)

Surgical treatment provides better immediate and long term results than pharmacological therapy or pneumatic dilatation.(1,3)

The patient under discussion had a laparoscopic cardiomyotomy. The procedure was done in an acceptable time with no significant blood loss. Her analgesic

requirement was minimal and had early mobilization and oral feeding. She had an immediate relief of dysphagia and regurgitation and was discharged from hospital on the first post-operative day.

Conclusions

This case report illustrates successful outcome with minimum morbidity in a patient who underwent Heller's

cardiomyotomy for achalasia cardia by laparoscopic approach.

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Competing Interests

None

References

1. Kale A, Walker J, Natarajan A. Achalasia cardia masquerading as gastroesophageal reflux disease: case report and review of literature, *Welsh Paed J* 2010;**34**:15-17
2. Pohl D, Tutuian R. Achalasia: an overview of diagnosis and treatment. *J Gastrointestin Liver Dis* 2007;**16**:297-303
3. Lake JM, Wong RKH. Review article: the management of achalasia – a comparison of different treatment modalities. *Aliment Pharmacol Ther* 2006;**24**:909-918
4. Patil H. Minimal Access Surgery(Laparoscopic Cardiomyotomy)for Achalasia Cardia. *IndiaWorld Journal of Laparoscopic Surgery* 2009;**2**:1-3.
5. Williams N, Bulstrode C, O'Connell PR. Bailey and Love's Short Practice of Surgery. 25th ed. London : Hodder Arnold, 2008.

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