causing infective endocarditis in hemodialysis patients (Staphylococcus aureus, Staphylococcus epidermidis and Enterococcus species) are susceptible to vankomycine therapy, which was used to treat our patient (15).

In conclusion, we have found this case to be interesting, as LVOT obstruction caused by mitral valve vegetation occurs extremely rarely. Although there were no serious haemodynamic consequences, surgical intervention might be needed in the close future to prevent further mitral valve damage and embolic incident with a potentially fatal outcome.

ACKNOWLEDGMENT/DISCLOSURES

Competing interests: none declared.

REFERENCES

had a successful recovery and was discharged on the fifth postoperative day. This case shows that laparoscopic treatment of achalasia is a feasible and safe procedure which can be performed even in a small country hospital, but it requires great technical care and experience of the surgeon.

**Key words:** esophageal achalasia, laparoscopic myotomy, anterior fundoplication.

**INTRODUCTION**

Esophageal achalasia is primary esophageal motility disorder (1), characterized by the absence of esophageal peristalsis and increased pressure at the lower esophageal sphincter due to the inability of the sphincter to relax (2). Clinical symptoms of advanced achalasia are dysphagia, regurgitation, chest pain and weight loss. The exact diagnosis is achieved by upper gastrointestinal tract radiography with barium and oesophageal gastric duodenoscopy (3). Commonly used treatments are botulinum toxin injections, endoscopic balloon dilation and surgical myotomy with or without fundoplication (1). Laparoscopic myotomy of distal oesophagus and gastric cardia with antireflux anterior partial fundoplication has gained popularity in recent years and is now considered to be a treatment of choice for oesophageal achalasia in most centres (4).

In this paper we have presented the case of the first laparoscopic treatment of a 32-year old female with achalasia in Croatia.

**CASE REPORT**

A thirty-two year old female was admitted to hospital because of dysphagia, regurgitation, chest pain and weight loss symptoms. Chest radiography, upper gastrointestinal radiography with barium (Figure 1) and oesophageal gastric duodenoscopy confirmed our clinical diagnosis of achalasia.

After the standard preoperative assessment we have performed the laparoscopic Heller myotomy with anterior partial fundoplication (Dor). During this procedure, the patient is placed in a supine position with reverse Trendelenburg maneuver and separated legs. The first surgeon stands between the patient’s legs with a camera on the right side of the patient and the second surgeon on the left. Trocars are placed as follows: 1 on the left flank on the hemiclavicular line, 1 transumbilically for the camera, 1 left subcostally, and 1 left and 1 right periumbilically.

A pneumoperitoneum is created by CO2 insufflation with a 12 mmHg pressure.

After retracting the stomach and liver and detecting the gastroesophageal junction, the phrenoesophageal ligaments are cut and isolation of oesophagus is achieved. Anteriorly, a myotomy is then carried out (Figure 2), leading to mucosal herniation, with muscle dissection approximately 7 cm.

Air insufflation through a nasogastric tube aims at excluding perforation of the herniated esophageal mucosa, and the presence of a pneumoperitoneum.
of air bubbles at the myotomy site must be ruled out as well. The procedure is completed with a 180° anterior funduplication to protect the herniated mucosa and prevent gastroesophageal reflux. The nasogastric tube inserted at the moment of surgery was removed after 24 to 48 hours, and patient resumed oral feeding on the 3rd day postoperatively and was discharged on the 5th day.

The aim of the therapy is to relieve dysphagia. Commonly used treatments are botulinum toxin injections, endoscopic balloon dilatation and surgical myotomy with or without fundoplication (1). Pharmacological therapy is the only non-invasive treatment for achalasia, but provides a short-term clinical response and it is considered as an option for patients who are too frail for endoscopic or surgical treatment (5). Endoscopic botulinum toxin injections should be reserved for elderly patients with severe comorbidity (1) and balloon dilatation has many side effects. Surgical therapy seems to accomplish the aim of therapy with reproducible results and low morbidity. Surgical approach includes open thoracic and transabdominal, thoracoscopic and laparoscopic techniques. With the adaptation of laparoscopy to many conventional surgical procedures, this minimally invasive procedure has become a good alternative for the treatment of achalasia. However, whether it is performed abdominally or thoracically, the length of myotomy at the esophagus, the length of myotomy at the stomach, and the choice of additive antireflux procedure are the aspects of the procedure that still need to be evaluated (6). The main reason for controversy about the choice of surgical method in achalasia is the possibility of postoperative dysphagia and reflux. The length of esophageal myotomy has been reported to be between 5 and 12 cm (7, 8). We performed the myotomy with the length of 7 cm. It is reported that esophageal myotomy with a length of <5 cm results in a high incidence of dysphagia (8). We performed the laparoscopic esophagomyotomy with Dor anterior fundoplication without any postoperative complications. The majority of studies reported no case of esophageal mucosal perforation and excellent or good results in 78-100% of cases (relief from symptoms or occasional dysphagia not requiring medication or dietary restriction) (9,11).

This case has shown that laparoscopic esophagomyotomy has the advantages of minimal invasive surgery, including less mobilization of the esophagus, less dysphagia and reflux with appropriate esophagogastic myotomy, short hospitalization, and minimal post-operative pain. It is feasible and safe procedure which can be performed even in a small country hospital, but it requires great technical care and experience of the surgeon.

ACKNOWLEDGMENT/DISCLOSURE

Competing interests: none declared

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