TRANSTHORACIC HELLER’S MYOTOMY FOR
ACHALASIA OF CARDIA
EXPERIENCE WITH 28 PATIENTS

MOHAMMAD ZAHIDULLAH, SHAHKAR A SHAH, ZAHOOR A KHAN
AND KHALID IRSHAD

Department of Cardiothoracic Surgery,
Postgraduate Medical Institute,
Lady Reading Hospital, Peshawar.

SUMMARY

Extra mucosal cardiomectomy (Heller’s myotomy) remains the most common surgical treatment for achalasia of cardia. Twenty eight patients underwent transthoracic Heller’s myotomy for achalasia of cardia at Postgraduate Medical Institute, Lady Reading Hospital, Peshawar from May 1990 till April 1995. No anti reflex procedure was combined with the myotomy. There were no hospital deaths. One patient had a reoperation for a leak. All patients have excellent to good clinical results with no gastroesophageal reflux. The follow up ranges from 12 months to 73 months with a mean of 34.5. We conclude that a properly performed Heller’s Myotomy can give excellent results in the management of esophageal achalasia, without an antireflux procedure.

INTRODUCTION

Achalasia is a Greek word which means failure to relax.1 It is due to decreased number or absence of ganglion cells in the Auerbach’s plexus between the inner circular and outer longitudinal layers.2 The cause of the change in the Auerbach’s plexus remains unknown. Primary peristalsis is absent and the cardio esophageal sphincter fails to relax in response to swallowing.3 The esophagus fills up with food and fluid leaving the contents to tickle into the stomach under the influence of simultaneous contraction waves and gravity.2 An absent gastric bubble is diagnostic as the air that accompanies a normal bolus does not enter the stomach. The condition is uncommon in children.4 Though it may affect people of any age, most patients present between the age of 40-60 years.3

Treatment with nifedipin and nitrates are not long lasting and rarely avoid surgery5.6 The treatment for achalasia is based on the principle that there is an abnormal sphincter which causes obstruction, and weakening, but not destroying it completely, improves esophageal emptying even though the underlying pathology itself can not be changed.7 Pneumatic dilatation of the esophagus and dilatation with soft dilators and bougies have been described. A German surgeon Ernest Heller performed the first successful surgical procedure, on 14th April 1913, through a laparotomy and consisted of double myotomy. The technique was modified by a Dutch surgeon, Zaaier, in 1923, by using a single myotomy incision.8

The weakening of the gastro-esophageal sphincter by a single incision approached through abdomen or chest is surgical procedure of choice. When the procedure was done through an abdominal incision, gastro-esophageal reflux was almost twice as common as when it was done through a thoracic incision, regard-
less of whether an antireflux procedure was performed.

The aim of study was to show the results of transthoracic Heller's myotomy without an antireflux procedure.

MATERIAL AND METHODS

Twenty eight patient were operated for achalasia at the Cardiothoracic Unit of Lady Reading Hospital, Peshawar from May 1990 till April 1995. The age range was from 10 to 80 (mean 39.01) years (Table-I). Sixteen (57.14%) were male patients while 12 (42.86%) were female (Table-II).

Investigations

Barium swallow was done in all the cases. Patients with any suspicion of malignancy on barium swallow or those more than 50 years of age also had esophagogastroscopy and biopsies to exclude malignancy. The facilities of manometry or 24 hours œsophageal pH monitoring are not available at our Institute, so these tests could not be performed.

Treatment

Every patient was started on fluid diet 48 hours prior to surgery. The night before the operation a nasogastric tube was put in the dilated thoracic esophagus which was then thoroughly washed with isotonic saline. This was done to prevent aspiration of œsophageal contents at the time of anaesthetic induction. Despite that cricopharyngeal pressure and crash induction was used to anaesthetize the patients.

A left thoracotomy was performed through 6th intercostal space. Distal thoracic œsophagus was mobilized preserving both vagi and religiously avoiding damage to the posterior phreno-esophageal membrane, so essential in preventing gastro œsophageal reflux. A vertical myotomy was then carried out dividing all the muscle layers down to the mucosa. Transverse fibrous bands across the mucosa were also divided. Myotomy was carried down to lcm below the gastro œsophageal junction and 2 cm. proximal to the narrowed achalasia segment. The divided muscle fibers were finally exerted by stitching them to mediastinal pleura over the aorta.

RESULTS

Morbidity and Mortality

One patient had a leak detected post operatively which was treated with careful suturing of the mucosa on re-operation. We did not have any in-hospital mortality.

Follow up

The presenting symptoms were; dysphagia in all the 28 patients (100%), vomiting in 15 (53.57%), pain in 6 (21.45%) and respiratory problems in 3 (10.7%) (Table-III).

Four patient have been lost to follow up. Rest of the 24 patients followed up from 12 months to 73 months with a mean of 34.5 months. All our patients are free of dysphagia. They do not have any gastro œsophageal reflux on clinical grounds.

DISCUSSION

The treatment of the dilatation of the lower œsophagus by a whalebone probang was first described in 1672 by Willis. Current treatment modalities for achalasia of œsophagus are palliative and aim at improving œsophageal emptying by reducing distal œsophageal sphincter resistance to the pass-
TABLE – III

<table>
<thead>
<tr>
<th>Condition</th>
<th>Value</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dysphagia</td>
<td>22</td>
<td>100%</td>
</tr>
<tr>
<td>Vomiting</td>
<td>15</td>
<td>53.57%</td>
</tr>
<tr>
<td>Pain</td>
<td>6</td>
<td>21.45%</td>
</tr>
<tr>
<td>Respiratory Symp.</td>
<td>3</td>
<td>10.70%</td>
</tr>
</tbody>
</table>

The use of esophageal manometry was employed only in 5% of series reported, in the review paper by Andrello NA and Earlam RJ. Esophagoscopy was done in 12% of the patients while other tests such as acid perfusion, pH measurement and cine-radiography were rarely used.

We do not have facilities of manometry, and acid perfusion, pH measurement and cine-radiography available to us. These tests were also not routinely used in the study mentioned above. All our patients being followed up are symptoms free with no complaint of reflux on clinical grounds.

We did esophagoscopy in patients, (17.9%) who were more than 50 years old as compared to 12% in the study already mentioned.

We had one patient of 10 years of age while two other were 70 and 80 years each. Majority of our patients (85.8%) were between the age of 30-60 years which is in accordance with the literature. The older patients in our study did not have any evidence of malignancy on esophagoscopy and biopsy and were offered Heller's myotomy.

The most important early complication of Heller's myotomy is perforation of mucosa. It's incidence in the literature has been reported to be 1.1%. We had one patient with the complication (3.6%). It was dealt with by suturing of the mucosa with no complications, later on.

The mortality of Heller's myotomy has been reported to be 0.7% in various studies. We did not lose any patient in our study.

We have not, being a Cardiothoracic unit, done any cases via laparotomy which as indicated in literature may require an antireflux procedure.

**CONCLUSION**

We conclude that a properly performed Heller's Myotomy can give excellent results.
in the management of esophageal achalasia, without an antireflux procedure.

REFERENCES


