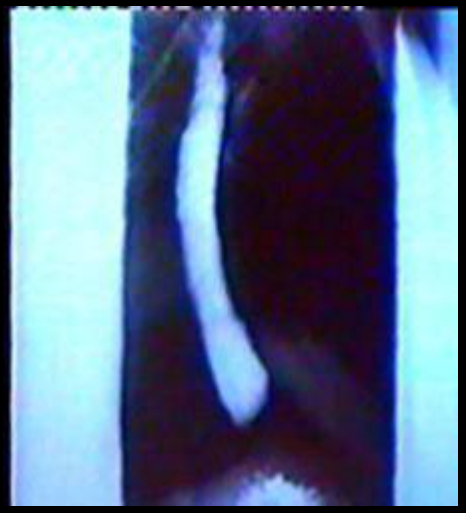
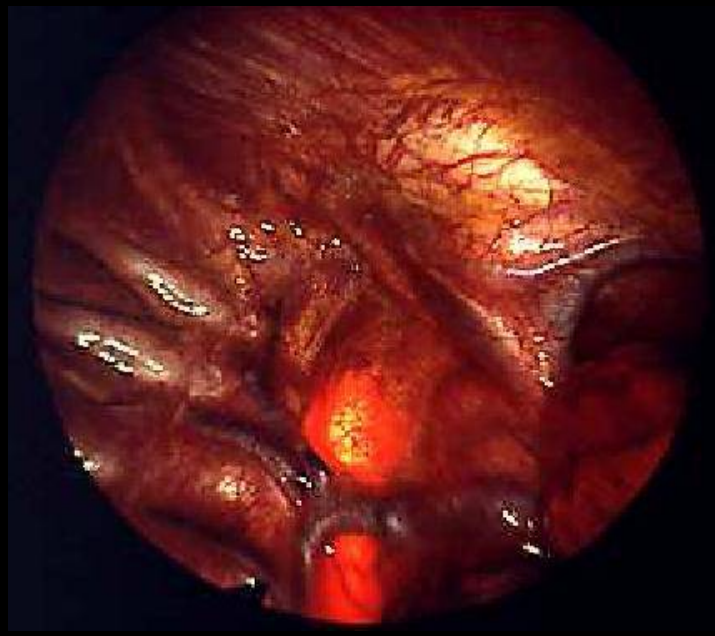
Thoracoscopic Lower Esophagus Myotomy



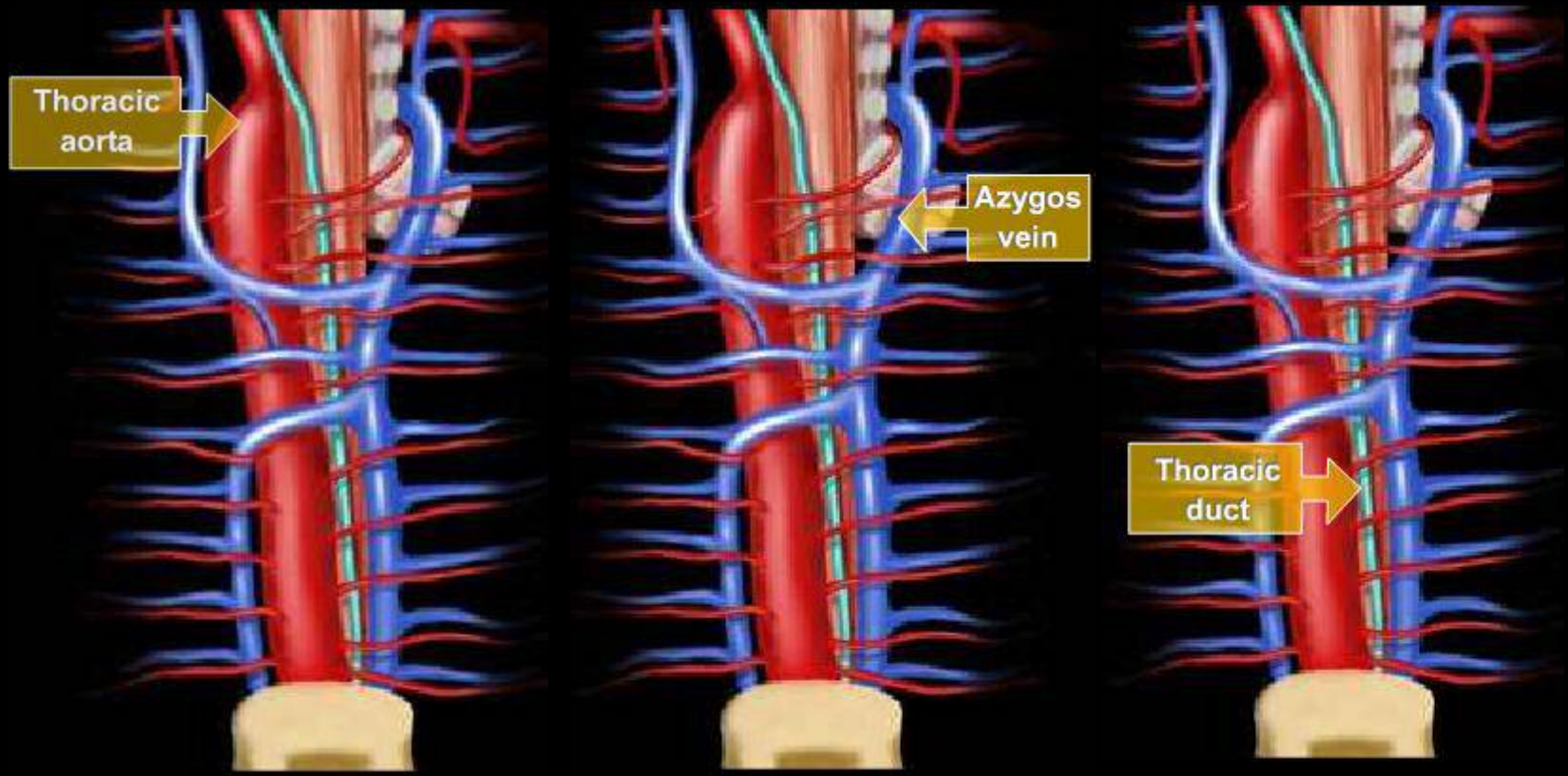
R.K.Mishra

Anatomy

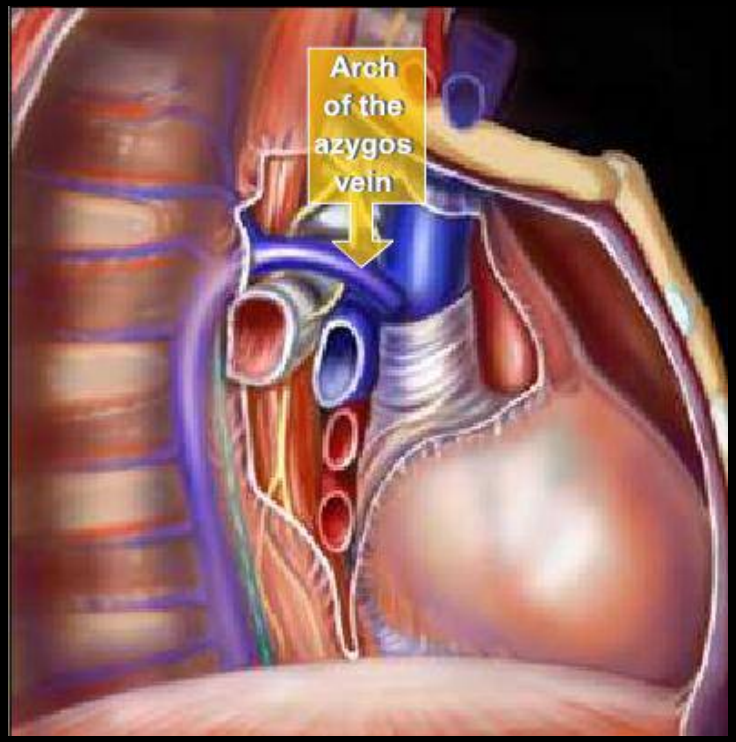
The thoracic esophagus is situated in the posterior mediastinum, below the mediastinal pleura. Its upper three fourths extends inferiorly in the right side of the thorax. After crossing in front of the aorta, it enters the left hemithorax. The upper two thirds of the esophagus should therefore be approached from the right and the lower one third from the left.



Relations

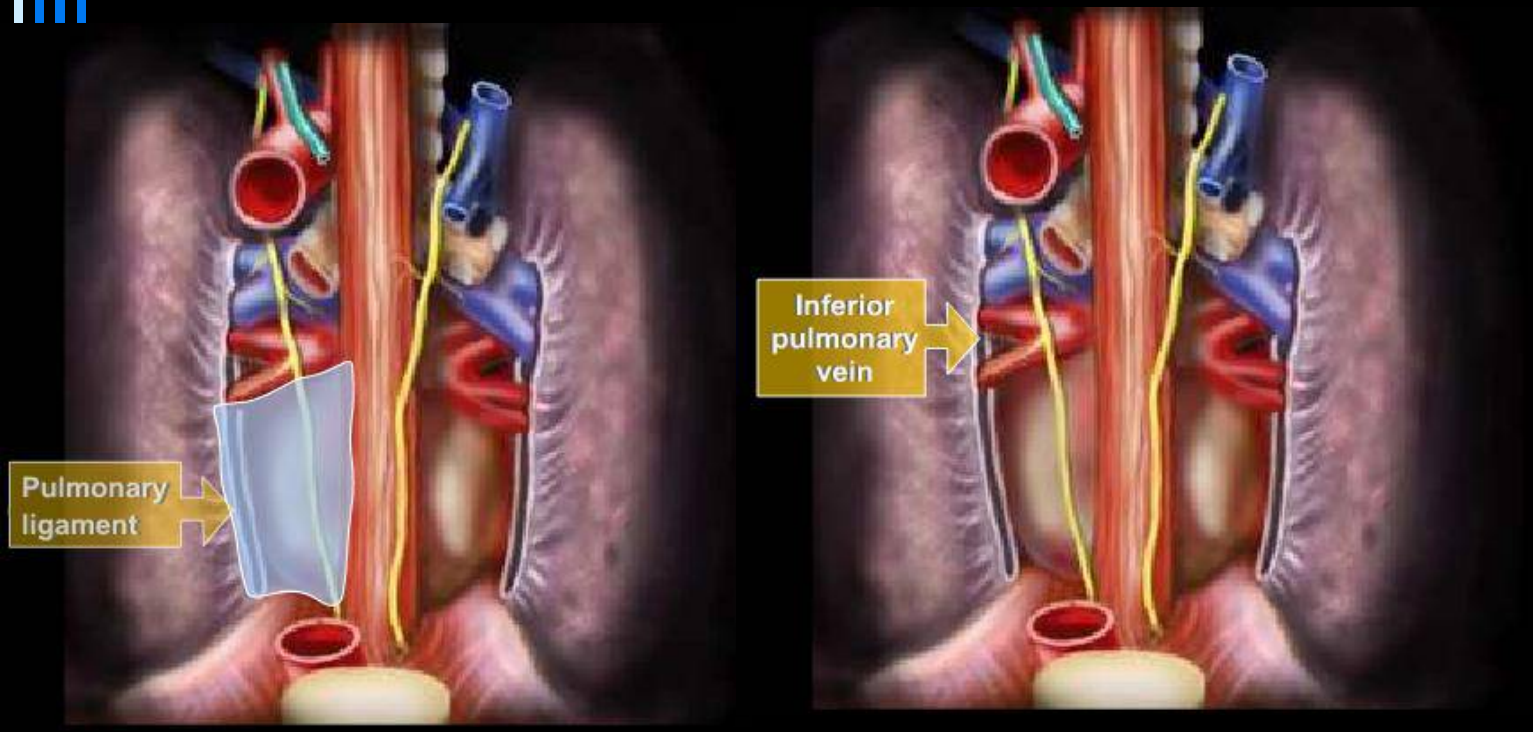


Relation



The esophagus is traversed by the arch of the azygos vein.
The rami of the right vagus nerve extend along its right side.

Relations



Access to the esophagus may require freeing of the pulmonary ligament. Care must be taken to remain at a distance to avoid injuring the left inferior pulmonary vein at its superior pole.
The left vagus nerve must be preserved.

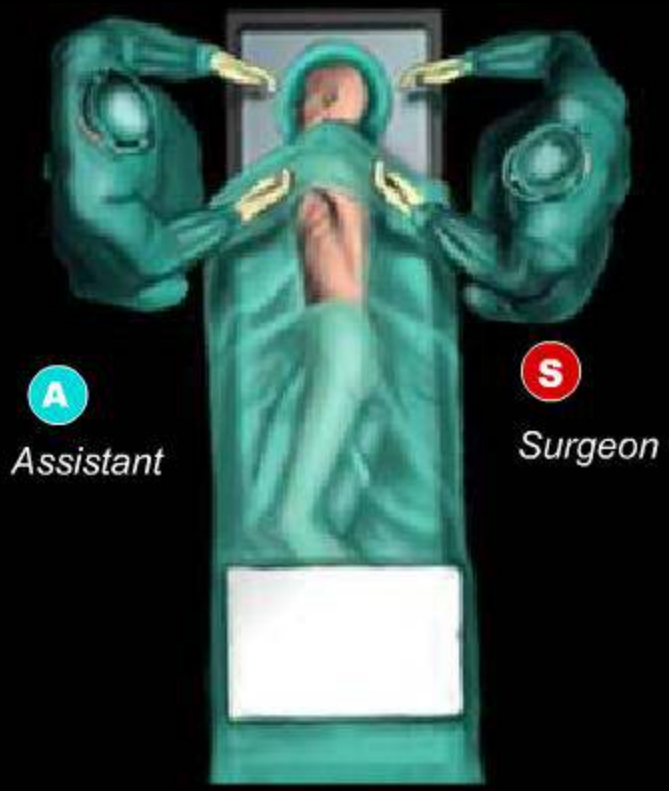
Patient Position

Principle of Surgery

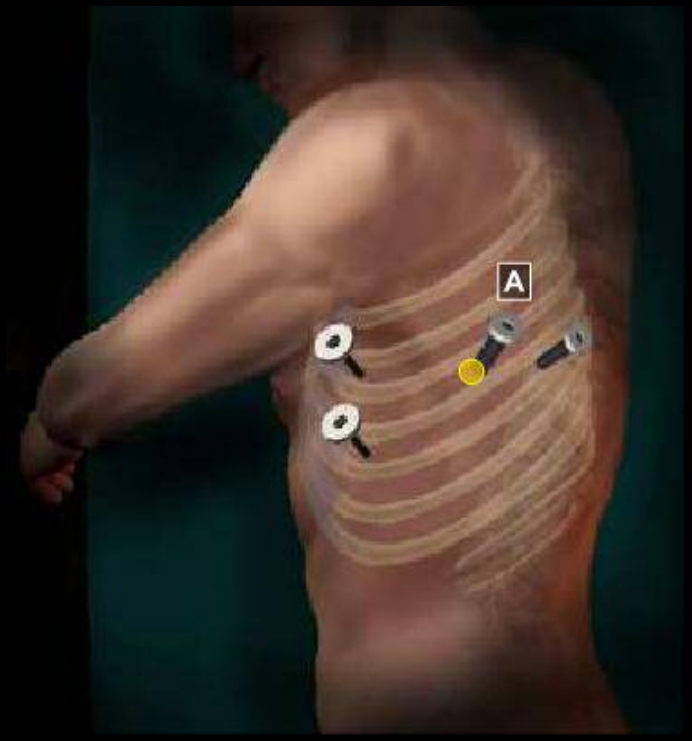
The aim is the same as for laparoscopic esophageal myotomies:
- to complete a myotomy at least 5 cm long on the thoracic esophagus and at least 1.5 cm long on the gastroesophageal junction;
- not to leave any residual muscle fibers;
- to preserve mucosa integrity.

Because the gastroesophageal junction is minimally mobilized by the left thoracic approach, an antireflux procedure is generally not necessary.

O.T. Setup

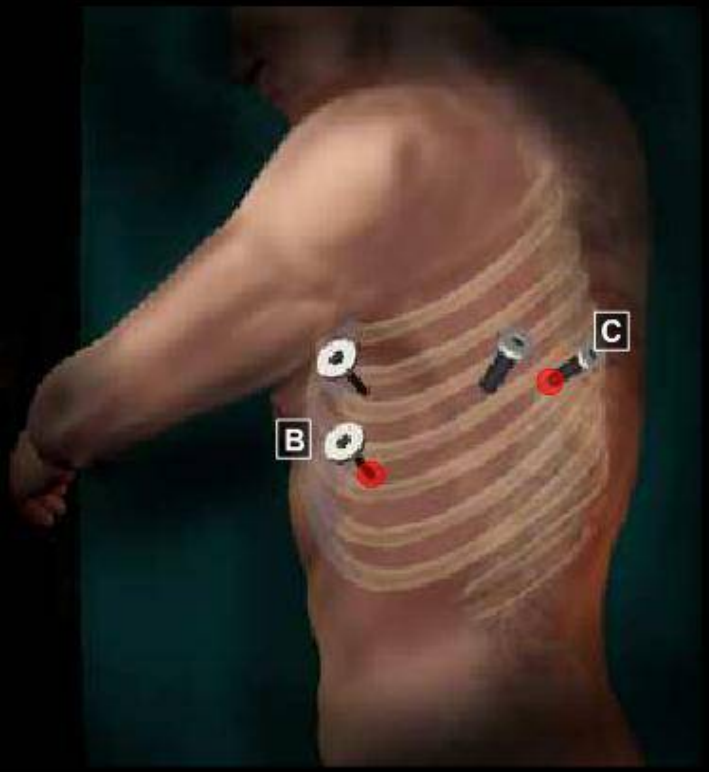


Port Position

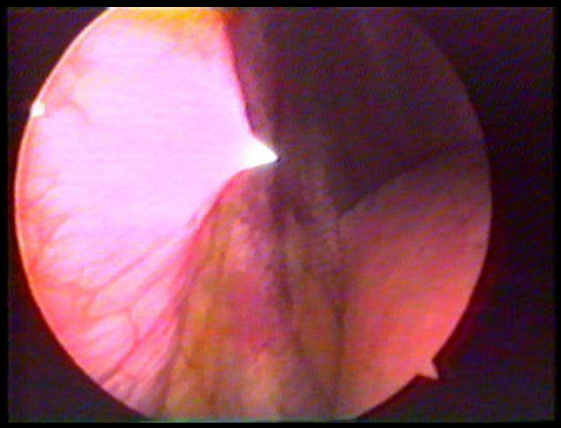


A: The optical trocar is inserted posteriorly to anteriorly on the mid-axillary line in the sixth intercostal space.

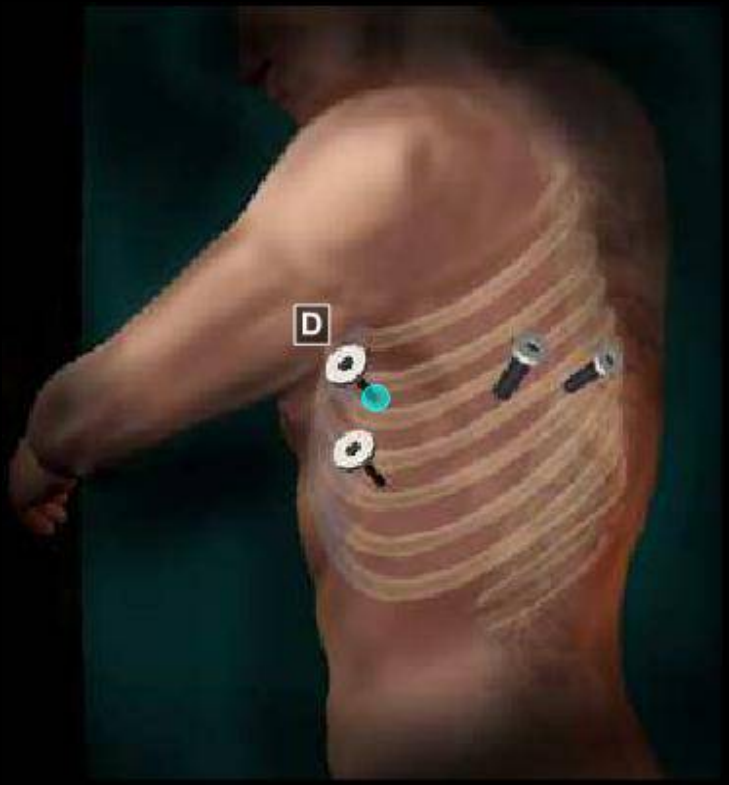
Port Position



B: Operating
A 5 mm trocar is inserted on the anterior axillary line, in the fifth intercostal space, for the grasper, electrocautery hook, or scissors.
C: A 10 mm trocar is inserted on the posterior axillary line, in the seventh intercostal space, for the grasper or suction-irrigation device.

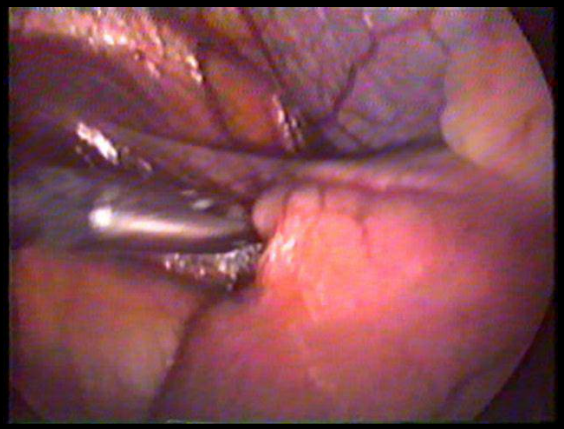


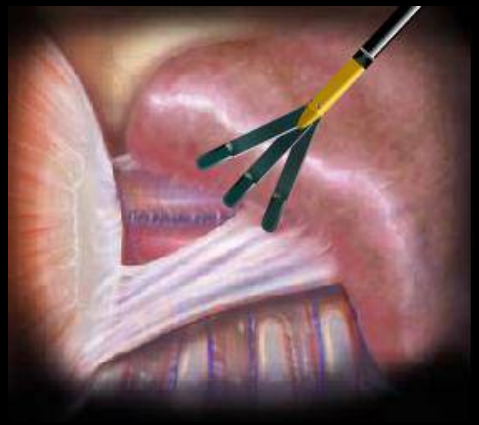
Port Position

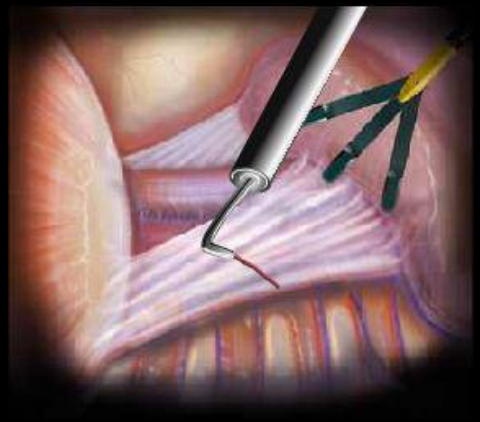


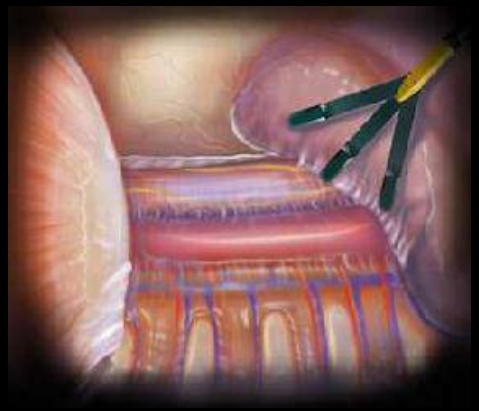
D: A supplementary 5 mm trocar may be used when the diaphragm must be retracted using an atraumatic retracting device. It is inserted on the mid-axillary line, in low position, in the seventh intercostal space.

Freeing of Pulmonary Ligament

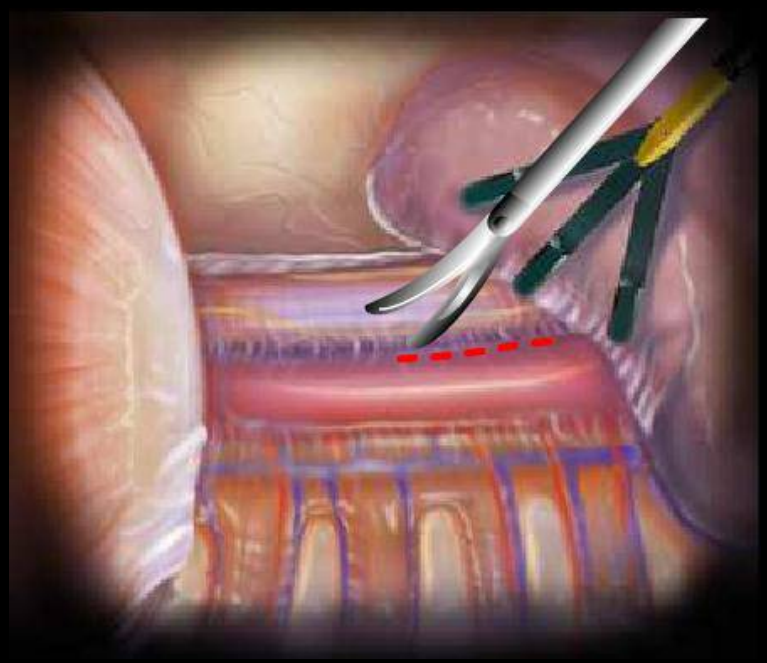


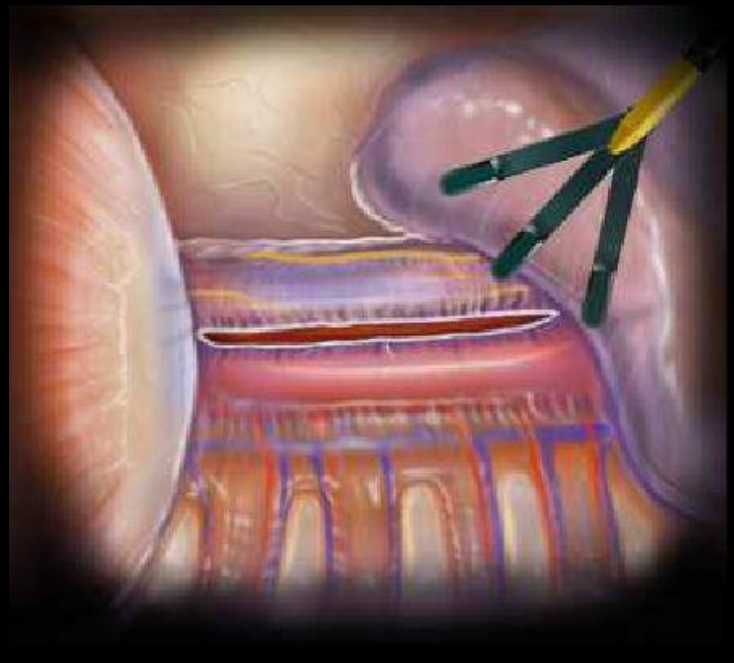




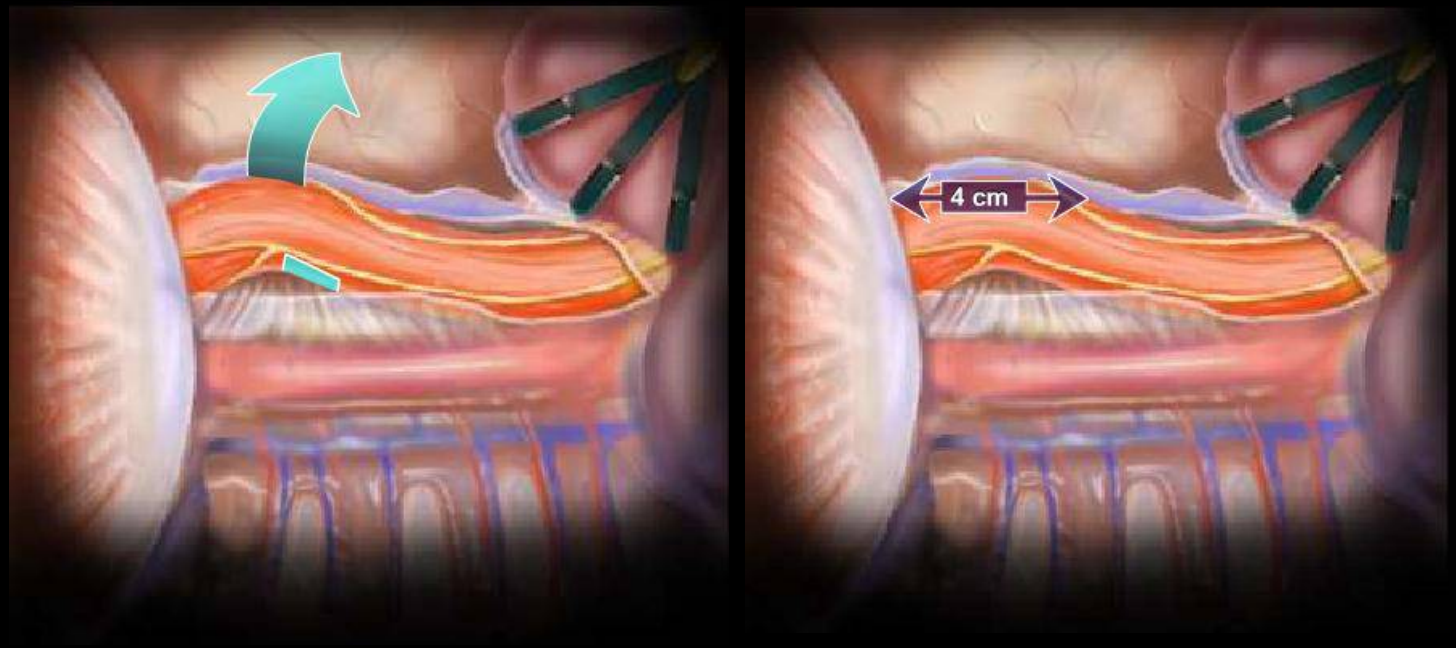


Opening of Mediastinal Pleura

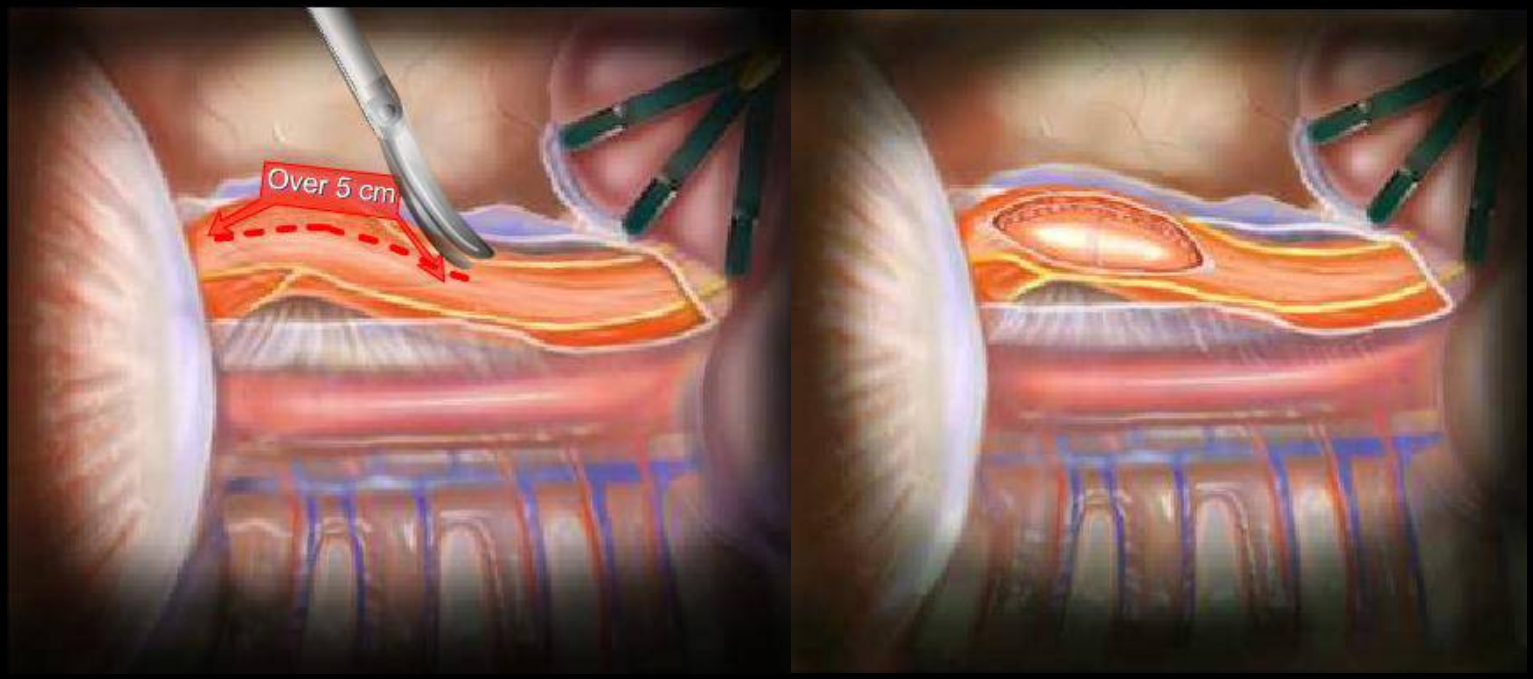




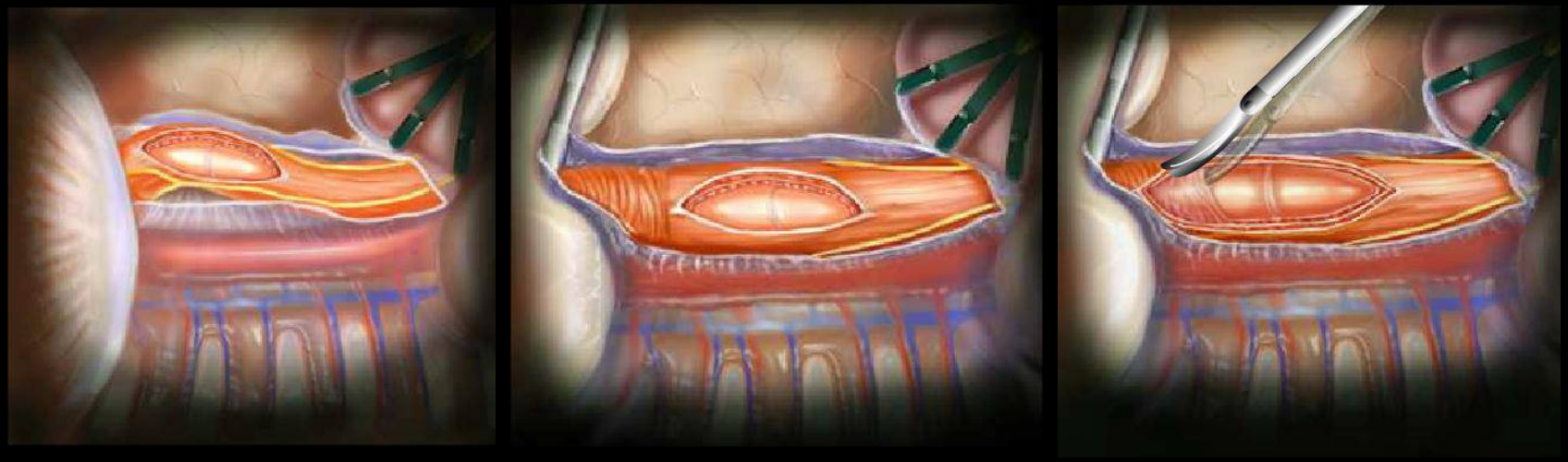
Pulling of Gastro-Oesophagial Junction



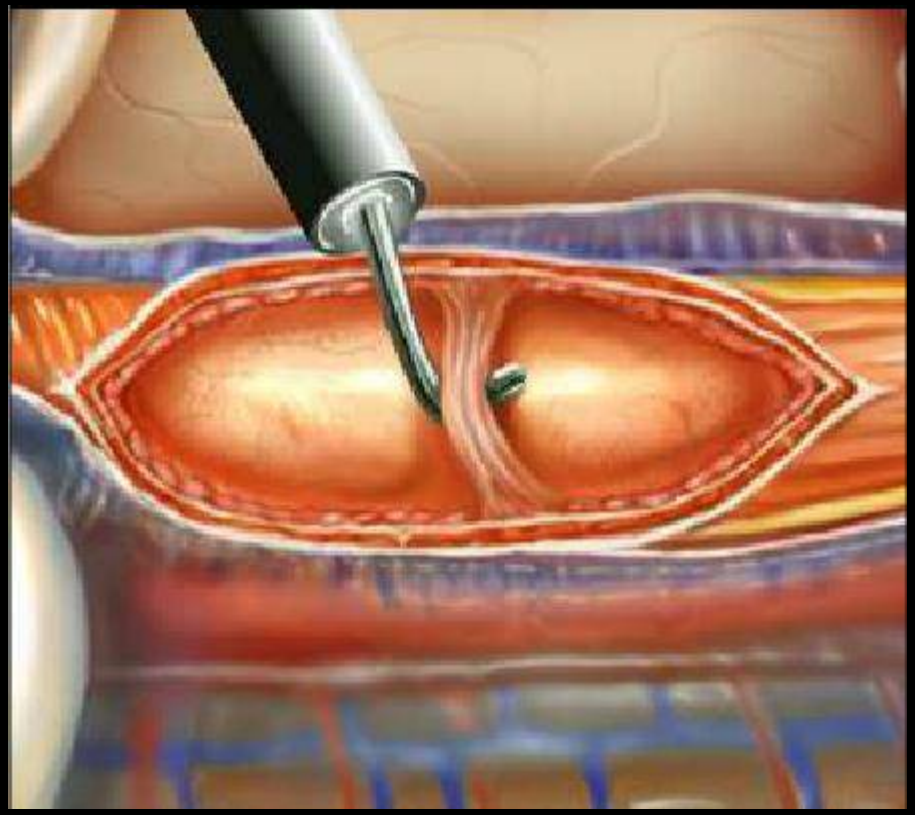
Myotomy



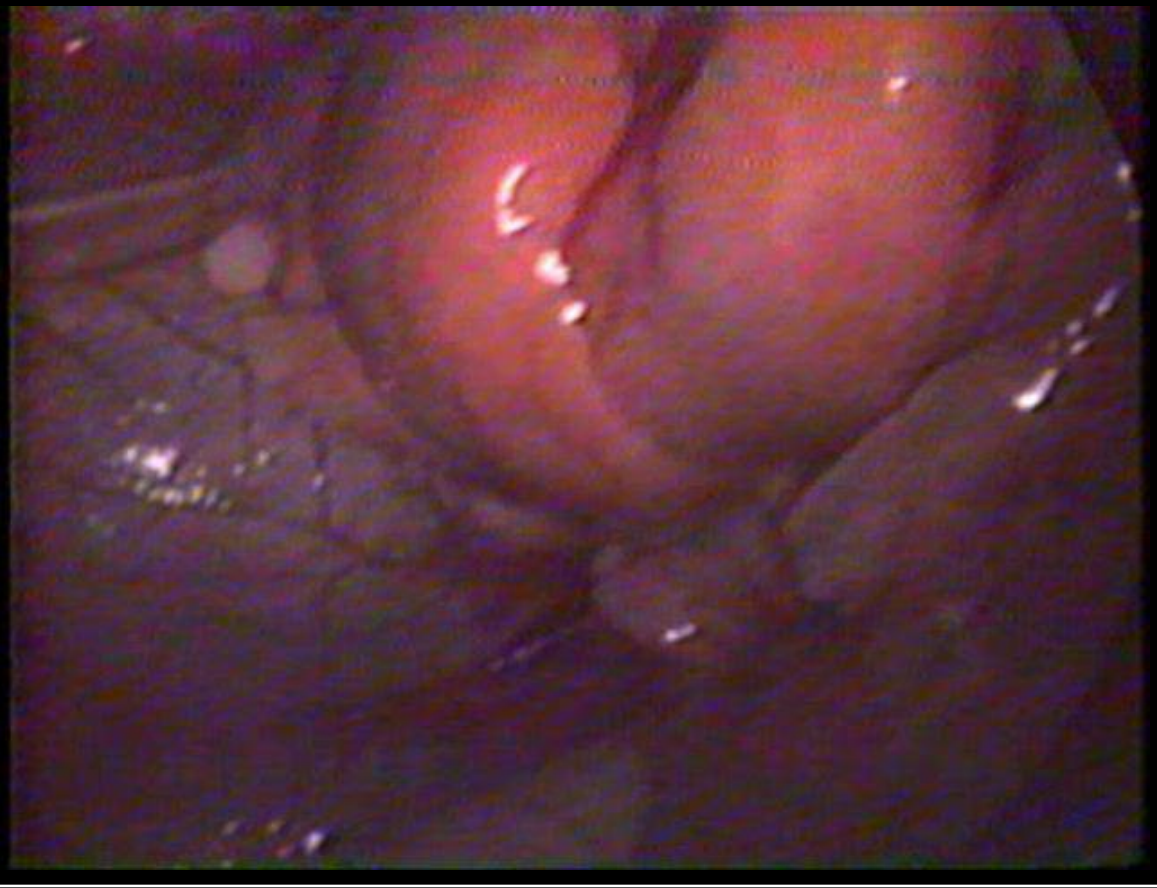
Extending the Incision to Abdominal Part of Esophagus



Residual Fibre

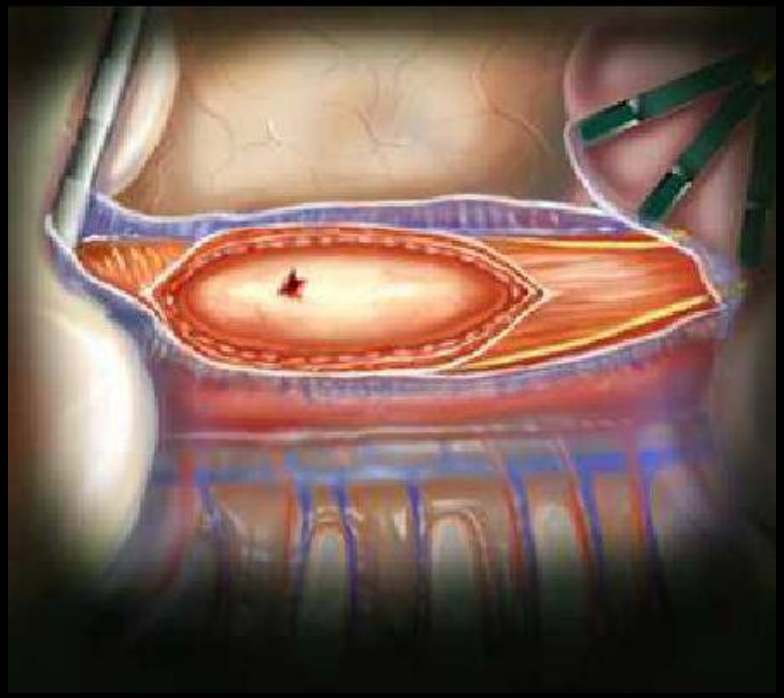


Thoracoscopic Heller's Myotomy



Complication

Intraoperative complication:
The only specific risk of complication involves injury to the esophageal mucosa.
For surgeons who are skilled in endoscopic sutures, it is possible to repair a perforation of the mucosa with one or several slowly absorbable sutures. It is advisable to reinforce the suture with biological glue.
Before resuming food intake, a contrast swallow and follow-through investigation is mandatory.



Thank You