Role of endoscopic glue therapy for post esophagectomy leak

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• A 57 year old hypertensive adult female patient presented with c/o dysphagia
• Diagnosed to have Squamous cell carcinoma of middle third of esophagus
• She underwent:
  □ Thoracoscopic mobilisation of thoracic esophagus
  □ Laparotomy and stomach mobilisation and pyloromyotomy
  □ Right cervical incision and esophageal mobilization
  □ Esophagectomy, division of stomach at cardiac end and esophagogastric anastomosis through the cervical incision
  □ Feeding Jejunostomy performed

• Stage pT1N0Mo
- POD5
  - Gastrograftin swallow- normal study
  - Oral feeds started
- Discharged on POD6
- On POD7 came with
  - C/o upper abdominal pain
  - Back pain on right side
  - Heart burn
• On examination
  - Pulse: 106b/m
  - BP: 160/90
  - Afebrile
• Systemic examination:
• R/S
  - Decreased breath sounds on right side
Management

- Labs: WNL
- Chest X ray (POD 7):
  - Homogenous opacity seen in right upper zone
  - B/L lower zone opacity? pleural effusion/pleural thickening
- RT inserted and aspirated 1.5l bile (POD 7)
- Chest X ray (POD 8):
  - Right hydropneumothorax? Leak
• On POD 10 CT scan thorax:
  □ Moderate Rt hydropneumothorax
  □ Severe collapse consolidation of rt lung
  □ USG guided ICD inserted
  □ Seropurulent fluid drained - 150ml

• Post procedure check CT-
  □ ICD in situ
  □ Near complete evacuation of pleural fluid
  □ Mild residual pneumothorax

• Patient clinically stable and well preserved, hence decided to manage conservatively
• Jejunostomy feeds started and built up to 2000kcal
• Gastrograffin study POD 13 through RT (as patient refused to take orally)
  □ Normal distal 2/3\textsuperscript{rd} of pulled stomach
  □ Proximal 1/3\textsuperscript{rd} of stomach and esophagus not visualized
• Chest Xray POD 17:
  □ Mild Rt pleural effusion with underlying consolidation
• Methylene blue test done to detect any active leak on POD 19 - drain showed dye
GASTROGRAFFIN STUDY

CHEST X-RAY POD 17
• Patient was clinically stable and tolerating jejunostomy feeds

• Decided to discharge the patient and to plan further management after observing the response of leak with NPO status at home

• She was discharged on POD 27 with drain in situ
On follow up at POD 37 leak persisted, decision regarding endoscopic evaluation taken

OGD UNDER GA
Cervical anastomosis healed well

Small hole seen where cardiac end was sutured

Balloon dilatation (15mm) of pylorus done

1 ml cyano acrylate glue injected around the hole and it was obliterated
• Repeat chest X-Ray
  □ Mild right pleural thickening
• POD 47 ICD removal done as drainage was minimal
Discussion

• Incidence of esophagogastric anastomotic leak - 5-20%
• Responsible for 1/3rd of perioperative deaths
• Cervical anastomoses tend to have higher leak rates than thoracic
  □ Cervical leak - 15.5%
  □ Thoracic leak - 4.2%
• Cervical anastomotic leak detection - 7.2 days post procedure.
• Thoracic anastomotic leak: 4.2 days. (1)
Management

• Established treatment options include:
  □ Conservative management,
  □ Percutaneous drainage,
  □ Endoscopic closure,
  □ Surgical revision(1)

• Endoscopic treatment are:
  □ Endoscopic vacuum assisted therapy(2)
  □ Placement of covered self expanding metallic stents(3)
  □ Endo clips(4)
  □ Endoscopic sealants: fibrin glue, cyanoacrylate, tissue graft(4)
• In this case we adopted a conservative management followed by endoscopic glue injection
• Patients initial symptoms settled with conservative management
• Additional glue therapy stopped the leak
• Long term efficacy and failure with this procedure still needs to be evaluated
References


