AMSER Case of the Month: September 2019

77 year-old female with complication after parathyroidectomy

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Patient Presentation

- CC: 77 year-old Caucasian female status post left parathyroidectomy presents two days postoperatively with increased swelling in left neck and dysphagia

- PMHx: Hypertension, arthritis
- SHx: 2 ppw smoking history x 30 years, no alcohol use
- FHx: Hypertension
- BP 129/85 | P 102 | T 37.1 | RR 18 | SpO2 95%
- Physical Exam: mild mid-epigastric tenderness on palpation, 1+ edema bilaterally
What Imaging Should We Order?
Select the applicable ACR Appropriateness Criteria

This imaging modality was ordered by thoracic surgery

<table>
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<th>Radiologic Procedure</th>
<th>Rating</th>
<th>Comments</th>
<th>RRL</th>
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Findings: (labeled)

Cardi mediastinal silhouette WNL

Right PICC line with Tip in mid SVC
Surgical team was suspicious for a chylothorax based on symptoms
Chylothorax

• Diagnosis
  • Triglyceride rich, milky fluid with >100 mg/dl triglycerides, > serum triglycerides, presence of chylomicrons
  • Neck may have erythema or palpable fluid collection in supraclavicular region
• Conservative management
  • Dietary modification – low fat, high medium chain fatty acids diet; consider TPN
  • High dose Octreotide
• Interventions
  • Reoperation with leak suturing
  • Sclerosing agents
  • Embolization
Select the applicable ACR Appropriateness Criteria

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This imaging modality was ordered by IR
Conventional Lymphangiography

**PROS:**
- Gold standard for visualizing lymphatic system
- Detect site of lymphatic leakage
- Minimally invasive
- Diagnostic and/or therapeutic

**CONTRAINDICATIONS:**
- Cardiac disease - increased risk of embolization
  - Presence of PFO, R → L shunt
- Pulmonary disease - increased risk of pulmonary infarction
  - Pulmonary insufficiency
- Oil/Dye Hypersensitivity

**RADIATION:** 1-10 mSv
Pedal Lymphangiography Procedure

a. Inject dye at web spaces between toes to stain foot lymphatics
b. Find and incise appropriate lymphatic vessel in foot
c-d. Cannulate dissected vessel with special lymphangiography needle
Pedal Lymphangiography Procedure

e. Infuse ethiodized oil and acquire serial fluoroscopic spot images to follow cephalad progression of oil
Pedal Lymphangiography Procedure

f. Needle access the lymphatic system via cisterna chyli under fluoroscopic guidance

g. Advance wire followed by microcatheter from cisterna chyli to thoracic duct

h. Inject contrast through microcatheter

i. Thoracic duct embolization with Tru-Fill biological glue and platinum coil embolization
References:


2. Direct lymphangiography as treatment option of lymphatic leakage: Indications, outcomes and role in patient’s management- ClinicalKey. [https://www-clinicalkey-com.ezaccess.libraries.psu.edu/#!/content/playContent/1-s2.0-S0720048X14004562](https://www-clinicalkey-com.ezaccess.libraries.psu.edu/#!/content/playContent/1-s2.0-S0720048X14004562). Accessed June 7, 2019.


