Case Discussion

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Patient Profile

- **Gender:** female
- **Birth History:** 36+5 wks, 2032gm, C/S
- **Chief Complain:** Sudden found a left neck mass 2 wks after birth. 4x2 cm
US

- Cystic lesion within fluid-fluid level
• Enhanced smooth thin-walled, cystic unilocular mass with fluid-fluid level
• Hypointensity on T1WI
• Mixed hyperintensity on T2WI
• Extension to supraclavicular fossa and left retropharyngeal area
• About 4.7*3.7*3.1 cm in size
• Lateral-posterior displacement of left carotid artery and jugular vein
• Anterior displacement of left thyroid gland
What is your impression or differential diagnosis?
Operative Findings

• A well-defined large lesion over the left neck without local invasion, with cystic straw-colored clear liquid content.
Pathologic Diagnosis

- Compatible with cervical thymic cyst
- Contains thymic tissue with Hassall corpuscles in the wall
Squamous cell

Thyroid

Parathyroid

Hemorrhage

Hassall's corpuscles

Squamous cell
Discussion: Cervical Thymic Cyst
Etiology

- Cystic remnant of thymopharyngeal duct, derivative of 3rd pharyngeal pouch
Etiology

- Failure of obliteration of thymopharyngeal duct
- Thymopharyngeal duct arises from pyriform sinus, descends into mediastinum
- Persistent sequestered remnants may occur from mandible to thoracic inlet
Epidemiology

- Peak: 2-15 y/o
- Slight male predilection
- Represent less than 1% of cystic cervical masses
Clinical presentation

- Often asymptomatic
- Gradually enlarging, soft, compressible mid- to lower cervical neck mass
- When large, may cause dysphagia, respiratory distress, or vocal cord paralysis
Unilocular cystic mass
- extending inferiorly within the neck
- paralleling the SCM or as a dumbbell-shaped
left cervicothoracic cystic mass
- Almost always found in left side of neck
- adjacent to the carotid sheath anywhere from the hyoid bone to the anterior mediastinum
- May splay carotid artery and jugular vein

Image Features
US of CTC

- Thin-walled anechoic or hypoechoic lateral neck mass
- Rarely has solid nodules in wall
Dumbbell-shaped left cervicothoracic cystic mass highly suggestive of either thymic cyst or lymphatic malformation

If unilocular lesion with discrete margins, may be thymic cyst or unilocular lymphatic malformation
Image Features

• CT: Nonenhancing low-attenuation neck cyst
  – Solid components rare (aberrant thymic tissue, lymphoid aggregates, or parathyroid tissue)
Cervical Thymic Cyst: A Rare Differential Diagnosis in Lateral Neck Swelling, Hindawi Publishing Corporation Case Reports in Otolaryngology, Volume 2013
MRI of CTC

- **T1**: homogeneous hypointense, still could be variable
  - Solid: iso SI
- **T2**: homogeneous high SI
- **T1+C**: wall and solid nodules may slightly enhanced
MRI of CTC
Common DDx

• **2nd BCC**: when infrahyoid, anterior to carotid space
• **4th BCC**: most common cyst anterior to left thyroid lobe
• **Lymphatic malformation**: fluid-fluid level common
• **Abscess**
• **Thyroid cyst**: intrathyroid
• Extremely rare: cervical bronchogenic cyst
Common DDx

- **CTCs**: close to the carotid sheath, between the internal jugular vein and the carotid vessels
- **BCCs**: superficial and lateral to both the internal jugular vein and carotid artery
- **Lymphangiomas**: generally restricted to the posterior triangle of the neck

Thymopharyngeal Duct Cyst
An Unusual Variant of Cervical Thymic Anomalies, jamaotolaryngology, 2001 Nov.
Pathological Diagnosis

• lobulated lymphoid tissue containing Hassall’s corpuscles
Prognosis

- Excellent prognosis if completely resected
- Recurrence common if incompletely resected
Summary

- Often asymptomatic
- Unilocular cystic mass
- Paralleling the SCM
- Most left side
- Dumbbell-shaped
- Could accompanied with bleeding
- DDx: 2nd BCC, Lymphangiommas, and cervical bronchogenic cyst (rare)
Reference

1. Diagnostic Imaging Head and Neck 2E
THANK YOU