ACP Case Presentation

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INTERNAL MEDICINE PGYII
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HPI

38 yo AA F
CC: Cough/SOB/abdominal pain

Cough x 4 days with periumbilical painful nodule x 3 weeks. Cough became more violent keeping her up the last 2 days that progressed to SOB. Productive of yellowish mucous. Cough worsened abdominal pain. Denied sore throat, nasal congestion, HA, fever/chills, night sweats, N/V, bloody stools, diarrhea, dysuria, joint pain, rash, weakness, LE pain/swelling, claudication.
- **PHx**
  - Fx of toe

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- **Last PAP Nml**

- **LMP: 18 d prior to admission**

- **SHx**
  - C-Section
  - Teeth extraction 2-3mo

- **FHx**
  - Diabetes M+F
  - Stroke M+F
  - CAD M

- **SoHx**
  - Married with 2 healthy children
  - Denies drugs, etoh, tobacco
  - CVS Pharmacy supervisor
  - No travel history or sick contacts

- **Allergies**
  - Nuts (pruritus), seasonal
Vitals

- BP: 117/75
- HR: 98
- RR: 17
- Temp: 98.3°F
- SpO2: 98% on RA
- BMI: 20
- EKG: Normal
• GEN: AAOx3, thin built, ongoing coughing spells
• HEENT: PERRLA, tongue is in midline without any thrush.
• NECK: Supple. No thyromegaly appreciated. No tracheal deviation.
• PULM: Unremarkable except diminished air entry on the right lung field
• HEART: RRR, no rubs, gallops or murmurs
• ABD: Soft, benign, nontender with minimal periumbilical hernia and umbilical nodular lesion, nontender and no obvious source of inflammation or drainage. BS+. No organomegaly
• EXT: No edema, no calf tenderness.
• NEURO: No focal signs. No cyanosis or clubbing.
Labs

139/3.8/104/27/8/0.78
7.4/12.8/38.2/296
LFTs unremarkable
Albumin Nml
Procalcitonin <0.05

CRP 0.9
ESR 22
UA negative
Pregnancy test negative
• XR Abdominal Series

Mixed interstitial and alveolar infiltrate in the RLL. Cystic airspaces or bulla in the RLL w/ a loculated pneumothorax in the RL hemithorax. This is probably approximately 10-15% of the total volume of the right hemithorax. There is a right pleural effusion.

Left lung is clear. Heart and pulmonary vascularity are normal.

Intestinal gas pattern is unremarkable. No abnormal calcifications are present.
- **CT Chest**

Very large loculated, right basilar hydropneumothorax with a small to moderate fluid component. Pneumothorax tracks through the right major fissure as well as the minor fissure. Nodularity above the R hemidiaphragm which is separate from the lung parenchyma measuring 12 mm, 12 mm, and 14 mm. No evidence of adenopathy.

Clear L lung
Cardiothoracic surgery, Pulmonology, ID consulted

- Doubt catamenial pneumothorax (LMP 6/8/16),
- Infection

- Transferred for VATS

- Empiric Zosyn

- Fungal panel, TB negative
Initial suspicion was for endometrial deposits but frozen section suggested liver. This does not appear to be a herniation, it appeared to be discrete nodules of liver tissue.

PATH: Revealed multiple fragments of benign liver tissue with hemosiderin and reactive mesothelial cells. No definitive endometriosis was identified. No malignancy was identified.
Hepatic Ectopia

Ectopic liver tissue that has no connection with the mother liver

- Most commonly found incidentally during surgery in the intra and retroperitoneum or during autopsy. There are only a few reported cases of supradiaphragmatic ectopias (18 cases since 1978-2002, 1 case report 2009 of 54 yo F found with intrapulmonary nodules after orthotopic heart transplantation.

“To our knowledge, multiple ectopic foci of the liver have never been reported at any site. Furthermore, this is the first reported case that involves a transplant recipient, thereby introducing additional, unique ramifications to this rare but intriguing entity.” 2009

Intrapulmonary Ectopic Liver After Orthotopic Heart Transplantation. Rupal I. Mehta, MD, Chi K. Lai, MD, Stephen Kee, MD, and Michael C. Fishbein, MD
Symptoms

- Most commonly asymptomatic, therefore detection of an abnormality by imaging before surgery or autopsy is unusual.

- Most of the reported supradiaphragmatic cases are found in neonates causing respiratory distress or hydropneumothorax.
Cause

- At week 3, erroneous dorsal budding of hepatic tissue before closure of the pleuroperitoneal membranes or an abnormal cellular migration during formation may explain how ectopic liver develops in the thoracic cavity.

- Expansion of the lung buds into the pericardioperitoneal canals. At this stage, the canals are in communication with the peritoneal and pericardial cavities.
Susceptibility to Malignancy

- Lacking a complete vascular and ductal system and is perhaps metabolically handicapped

- Leads to longer exposure to various carcinogenic factors and facilitating the carcinogenetic process.

- AFP, resection
- Could be underreported
- Radiologists are unaware of this condition- may not be picking it up on imaging
- Small size
- Asymptomatic
Resources

- Leone, N. Hepatocarcinogenesis in ectopic tissue. et al Eur J Gastroenterol Hepatol 16:731-35; 2004
- https://www.researchgate.net/publication/41401561_Ectopic_Liver_Tissue_Attached_to
- sciencedirect.com/science/article/pii/S0022346803004123
Questions?

Thank you