Torsed Ectopic Intra-Abdominal Liver Rest within an Adolescent Female

Kyle Smiley[1] BS; David A Partrick[2], MD; Kristine S Corkum, MD[2]; S Christopher Derderian, MD[2]

[1]University of Colorado Anschutz School of Medicine, Aurora, Colorado
[2]Division of Pediatric Surgery, Children's Hospital Colorado and University of Colorado, Aurora, Colorado

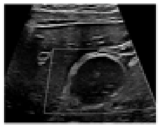
Background

- Extra-hepatic liver tissue is extremely rare, with an annual incidence of 0.24-0.47[1]
- Often an incidental finding on pathology of resected tissue[2,3]
- Risk of transformation to HCC highlights importance of resection when identified[4]

Case

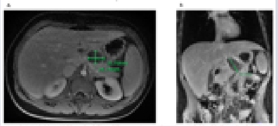
- 12y F with no significant PMH presented to pediatrician with 1mo of severe, intermittent epigastric pain and occasional bilious emesis that failed a trail of a GI cocktail.
- An abdominal ultrasound demonstrated a peripancreatic cystic mass with internal debris located between the stomach and pancreas (Figure 1).
- Given the unclear origin of this lesion, an abdominal MRI was obtained that identified a T1 hypointense, T2 hyperintense rim enhancing 4.3 cm mass with surrounding edema and adjacent peripancreatic inflammation (Figure 2).
- Differential diagnosis at that time included a foregut duplication cyst, an infradiaphragmatic sequestration and a pancreatic cystic lesion.
- Although the diagnosis remained unclear, her symptoms persisted during the workup, thus, we elected to take her to the operating room for a laparoscopic resection.
- During the procedure, a 4.5 cm firm, incapsulated mass was identified inferior to the left lobe of the liver, with the stalk originating from the lesser curvature of the stomach.
- Pathological evaluation revealed infarcted heterotopic liver parenchyma, consistent with a torsed liver rest (Figure 3).
- The patient was discharged on post-operative day one, and at her follow-up appointment one month later was asymptomatic.

FIGURE 1: Initial Abdominal Ultrasound



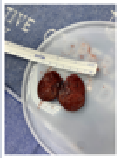
Legend: Abdominal ultrasound demonstrating hypoechoic, peri-pancreatic mass between stomach and pancreas (white box).

FIGURE 2: Abdominal MRI of Suspicious Mass



Legend: A) Axial abdominal MRI [illegible] B) Coronal abdominal MRI demonstrating 4.3 cm mass [illegible] peripancreatic inflammation.

FIGURE 3: Ectopic Liver Mass



Legend: Excised and bisected abdominal mass.

Discussion

- Less than 100 unique cases have been published in the English literature
- Healthy liver appears uniform, with T1 hypointense and T2 hyperintense signals on MRI [7]. Though presence of tissue with these characteristics is not diagnostic for EL.
- Considered endoscopic biopsy but given the severity of her symptoms, we elected to proceed with surgical resection without further workup. Biopsy risks hemorrhage and potential malignancy seeding.
- EL tissue has been described in several organs [1-6]. Most commonly, it has been identified in the gallbladder, likely due to proximity of the gallbladder to the native liver [10].
- Theorized that EL is derived from aberrant hepatic tissue migration from a foregut diverticulum during embryological development [8].
- In general, EL tissue should be excised due to the increased risk of hemorrhage, pain, and transformation to hepatocellular carcinoma [5].
- Surgical excision is the only documented treatment modality. Alternative treatments such as arterial embolization and pharmacologic management have not been described.
- When possible, laparoscopic resection should be attempted to decrease length of hospital stay and reduce complications [11]. When completely resected, prognosis is excellent with no documented recurrence in the literature.
- Although most commonly found within other organs, our report demonstrates that EL rests can occur as independent, encapsulated masses.

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