Pseudo-cirrhosis Secondary to Metastatic Breast Carcinoma Causing Sinusoidal Obstruction

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Introduction:

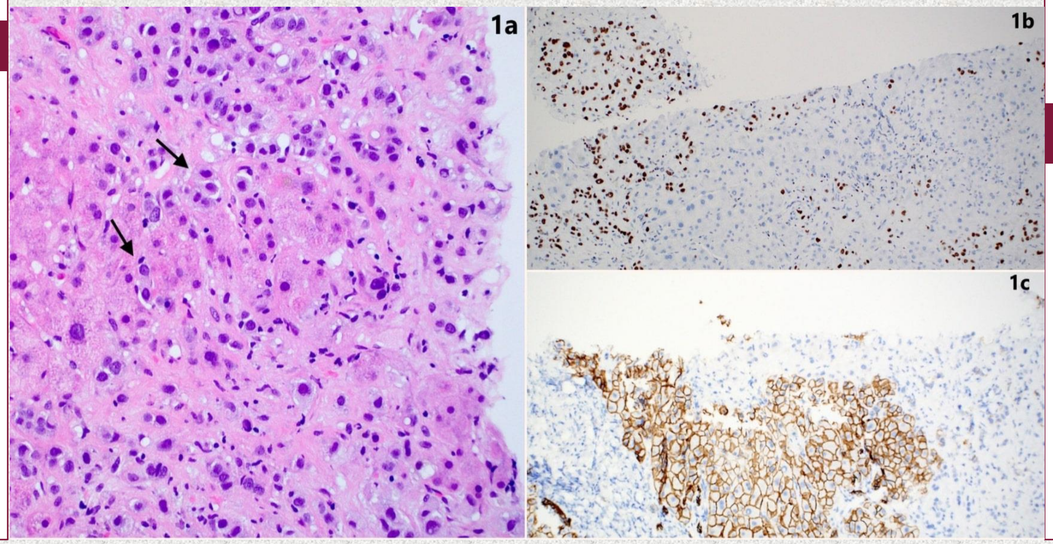
- The most common causes of acute onset ascites in the absence of significant liver fibrosis are infection, or venous occlusion from thrombi/emboli or tumors large enough to cause vascular obstruction.
- Clinically significant pre-sinusoidal and sinusoidal obstruction from microscopic tumor deposits is extremely rare.
- We present a case of acute onset ascites secondary to microscopic metastatic tumor deposits in the liver causing sinusoidal obstruction.

Case presentation :

- 70-year-old female with past medical history of colonic adenocarcinoma, hemicolectomy presented with acute abdominal pain and distension.
- Labs showed AST 387 IU/L, ALT 167 IU/L, alkaline phosphatase 546 IU/L, total bilirubin 2.5 and direct 1.1 mg/dl (no past history of liver disease, previously normal LFTs), negative acute viral hepatitis panel.

Histopathology :

- Histopathology revealed the initial presentation of ductal breast carcinoma metastatic to the liver, poorly differentiated involving portal areas and filing the sinusoids (Figure 1a).
- The carcinoma was keratin CAM5.2, CK7, GATA3 (Figure 1b), mammaglobin, and BRST-2 positive, confirming metastatic breast carcinoma; the positive e-cadherin (Figure 1c) stain helps confirm ductal phenotype.
- Negative stains included CDX-2 and villin, excluding a colorectal primary, and Napsin-A and TTF-1 excluding a pulmonary adenocarcinoma.
- Arginase 1 negative, excluding a poorly differentiated hepatocellular carcinoma.
- Masson-trichrome/ reticulin stains showed pseudo-cirrhotic pattern with many hepatocytes separated by fibrosis along with infiltration of large numbers of tumor cells. Quantitative ER and PR staining were negative.



Clinical Course:

- CT abdomen and pelvis without contrast showed normal liver without focal lesions, mildly enlarged spleen and moderate ascites.
- Diagnostic paracentesis was negative for spontaneous bacterial peritonitis, with SAAG>1.1 and total protein 1.2 g/dl.
- Surgical cytology was negative for metastatic disease.
- MRI abdomen: unremarkable liver, gall bladder and biliary system.
- 2D echocardiogram showed no acute abnormalities.
- Abdominal veins duplex showed hepato-fugal flow in the main portal vein but normal flow in the hepatic vein and IVC.
- A diagnostic liver biopsy was obtained (porto-systemic gradient = 26 mmHg)

Discussion:

- The possibility of microscopic tumoral sinusoidal obstruction should always be in the clinical and histopathologic differential diagnosis in patients presenting with acute hepatitis and portal hypertensive features, especially ascites.

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