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Clinical Image

Primary Renal Angiosarcoma with an unusual Hepatic Presentation

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Clinical Image

The case describes a 69-year-old male who presented with fatigue, abdominal pain and hematuria. Relevant laboratory findings included hemoglobin of 9.5 g/dL, creatinine of 1.5 mg/dL, alkaline phosphatase of 656 U/L, alanine transaminase of 75 U/L, aspartate transaminase of 107 U/L and gamma-glutamyl transferase of 673 U/L. A Computed Tomography (CT) scan was ordered that showed an expansile left renal lesion with heterogeneous enhancement, multiple very large hepatic cystic lesions and nodules in the lower lung concerning for metastatic disease. He then underwent cytoreductive nephrectomy. His hospital course was complicated by the development of an ileus, several intra-abdominal fluid collections and hypotension requiring the intensive care unit for vasopressor support (Figure 1 and 2). These liver lesions were found incidentally and initially diagnosed as being isolated Polycystic Kidney Disease (PCLD). However, the most significant risk factor for PCLD is sex. Female steroid hormones, pregnancy and exposure to exogenous female hormones influence secretion by and growth of liver cysts [1]. Also, this patient had no reported cysts in his kidney making the more common diagnosis of autosomal polycystic kidney disease unlikely. We then wondered if this presentation was more in keeping with metastatic disease from renal angiosarcoma. When comparing Hounsfield Units (HU) on CT between the hepatic lesions and the renal malignancy, they were both very similar in number and both greater than 20 HU which would be outside the range of cystic fluid. Furthermore, the MRCP done subsequently reported *"T2 hyperintense cystic lesions throughout the left and right hepatic lobe, some of which demonstrate a small amount of T2 isointense material, however not fully characterized on this non contrast exam."* Upon clarification with the radiologist, this describes the presence of a complex signal, not simple cystic fluid which could therefore represent metastasis. These lesions could therefore represent necrotic metastasis with cystic degeneration. Cystic liver metastases are the most important diagnosis to exclude when multiple cystic lesions are identified in the liver. Common primary sources for cystic hepatic metastasis include kidney, prostate and sarcomas [2]. The cystic nature of metastases is due to rapid growth beyond hepatic arterial blood supply of the lesion. These lesions would have been better characterized by a contrast study however the patient expired before further workup was completed. This image highlights the occasional ambiguity of radiographic images and the importance of clinical correlation.

References

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2. Rawla P, Sunkara T, Muralidharan P, Raj JP. An updated review of cystic hepatic lesions. Clin Exp Hepatol. 2019;5(1):22-9.

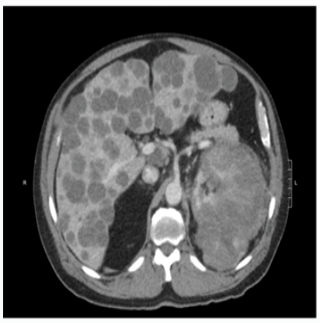

Figure 1: Computed Tomography of abdomen and pelvis performed on day of admission demonstrating evidence of an expansile left renal lesion measuring approximately 17x10x13 cm and multifocal cystic lesions seen scattered within the liver.

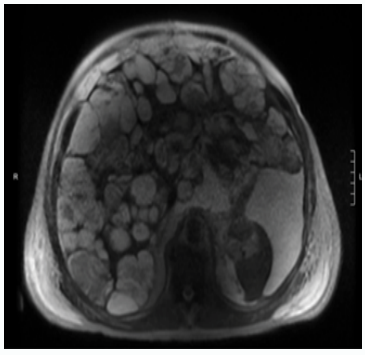

Figure 2: Magnetic Resonance Cholangiopancreatography demonstrating multiple T2 hyperintense cystic lesions, many of which demonstrate T1 isointense material centrally. Findings may be in keeping with a diagnosis of polycystic liver disease, although not fully characterized on this non-contrast exam.

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