

Fig 3. Pathologic specimen of the excised cyst.

5 days after surgery. The resolution of the cough and the mass, however, were replaced by a large scar and by discomfort from thoracotomy neuralgia.

Comment

This case is of no interest to us and is reported because of its extremely rare location presented in an adult, and also due to the issue of its diagnostic tools for a specific treatment plan. Two thirds of bronchogenic cysts present in the mediastinum (central), whereas the remaining cysts were located in the lung parenchyma (peripheral), with predilection to the lower lobes [2, 3]. The location depends on the embryologic stage of development at which the anomaly occurs. Those arising later are more peripheral [2]. With this knowledge, the lesion in our patient was easily misinterpreted as arising from lung parenchyma. Again, the presenting symptoms of the cough gave the impression of intrabronchioles communication, which in fact, the possible bronchiectatic changes occurred as a result of chronic compression and displacement of the distal airways by the enlarging cyst [3].

The fluid within the bronchogenic cyst is usually a mixture of water and proteinaceous mucus [5]. This variability is likely to be responsible for the attenuation seen on the conventional computed tomography, which made the scan unable to accurately diagnose the lesion. McAdams and colleagues [6] have suggested the usefulness of magnetic resonance imaging in this scenario. Furthermore, the adherence of the cyst to the expanded lung tissue obscuring the stalk in this case enabled us to suspect a pedunculated cyst arising from of the parietal pleura. Even though the bronchogenic cyst was suspected in this patient, due to its homogenous appearance, it was misleading that it was arising within the pulmonary parenchyma. With a late and nonspecific

presentation complimented by radiologic findings, the treatment for this case was planned as though it was a soft tissue lesion within the lung parenchyma, which required a pulmonary resection to establish the diagnosis. Intraoperative finding of a simple pleural cyst would have made the difference in terms of the patient consenting to the risks and complications of the less invasive procedure, such as video-assisted thoracoscopic surgery. This would have alleviated the anxiousness of the patient, and perhaps the surgical removal of the cyst would not have been unduly delayed. In conclusion, we suggest a more detailed assessment of any suspicious bronchogenic cystic, perhaps with magnetic resonance imaging and video-assisted thoracic surgical assessment to identify the nature and origin of the lesion prior to embarking on any surgical treatment.

References

1. Ryu JH, Swenson SJ. Cystic and cavitory lung diseases: focal and diffuse. *Mayo Clinic Proc* 2003;78:744–52.
2. Kaur S, Goyal R, Juneja H, Sood N. Intrapulmonary air filled bronchogenic cyst, a rare entity. *Ind J Radiol Imag* 2006;16:865–7.
3. Mampilly T, Kurian R, Shenai A. Bronchogenic cyst—cause of refractory wheezing in infancy. *Indian J Pediatr* 2005;72:363–4.
4. Sarper A, Ayten A, Golbasi I, Demircan A, Isin E. Bronchogenic cyst. *Texas Heart Inst J* 2003;30:105–8.
5. Nakagawa M, Hara M, Oshima H, et al. Pleural bronchogenic cysts: imaging findings. *J Thorac Imaging* 2008;23:284–8.
6. McAdams HP, Kirejczyk WM, Rosado-de-Christenson ML, Matsumoto S. Bronchogenic cyst: imaging features with clinical and histopathologic correlation. *Radiology* 2000;217:441–6.

Ectopic Liver: An Unexpected Finding in a Right Atrial Mass

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Ectopic liver is a rare finding, particularly in intrathoracic locations. We report the case of a 42-year-old woman with a mobile right atrial mass that was subsequently identified as ectopic liver by histology. Its point of origin was in a hepatic vein with extension into the right atrium. Although accurate diagnosis of ectopic liver may be possible with advanced imaging techniques, limited familiarity with the clinical entity is a barrier to early diagnosis.

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Ectopic liver is a rare anomaly in which macroscopic or microscopic foci of hepatic tissue present outside of the native liver. Aberrant liver tissue may be connected to the native liver by means of a biliary and vascular stalk, in which case it is referred to as an accessory liver lobe, or it may be completely separate from the native liver, in which case it is referred to as ectopic [1]. Ectopic liver is most often found in an intraabdominal location, with reported cases in the gallbladder, spleen, peritoneum, pancreas, and intraabdominal ligaments [2]. Less frequently, it presents in an intrathoracic location, including the chest wall, diaphragm, pericardium, and pleural space [2-5]. Cases of intravascular ectopic liver are even rarer, with only a few reports in the umbilical vein, portal vein, and inferior vena cava [2,6]. We report the second case in the literature of intracaval ectopic liver with cardiac extension, an incidental finding in an adult.

An obese 42-year-old woman with chronic anemia was evaluated for intermittent palpitations and dyspnea on exertion. Transthoracic echocardiography revealed normal valvular and ventricular function; however, a mass was noted in the right atrium. Further characterization with transesophageal echocardiography revealed a homogeneous and round 1.0×1.3 cm mass at the junction of the right atrium and inferior vena cava (Fig 1). On cardiac magnetic resonance imaging, the mass demonstrated intrinsic mild hyperintensity T1 and hypointense T2 signal, consistent with either a myxoma or fibroelastoma (Fig 2). Its point of origin appeared to be near the eustachian valve.

The patient was brought to the operating room for surgical excision of the mass under cardiopulmonary bypass. From the preoperative imaging, we believed that inferior vena cava (IVC) cannulation and snaring would not be feasible, so direct superior vena cava cannulation as well as retrograde inferior vena cava cannulation (through the right femoral vein and situated caudal to the

retrohepatic IVC) was achieved, and the right atrium was opened. There was minimal entrainment of air into the circuit and good visualization of the mouth of the IVC. A cardiotomy sucker was able to be inserted under direct vision into the IVC. The right atrium/IVC junction was explored; the mass was found to be originating from a hepatic vein. A pursestring stitch was placed around the base, and the mass was amputated. A $1.1 \times 0.6 \times 0.5$ cm soft, tan-brown specimen was submitted for microscopic review. Pathology examination revealed an encapsulated soft tissue mass containing normal liver tissue. This included normal-appearing cords of hepatocytes and portal tracts with bile ducts, veins, and arteries (Figs 3 and 4). The patient's postoperative recovery was uneventful, and at 9 months after resection she remains without evidence of recurrence or symptoms.

Comment

Our search of the literature yielded only one other case of ectopic liver presenting as an intracardiac mass. Chapman and colleagues [6] reported a case of a nonambulatory 12-year-old patient with Arnold-Chiari malformation who had deep venous thrombosis, and was noted on echocardiography to have an intracardiac mass causing partial obstruction of the right atrial-inferior vena caval junction. The mass, which was removed en bloc with a portion of the inferior vena cava, consisted of benign hepatic parenchyma on histologic examination. Although ectopic liver may cause symptoms due to local obstruction, compression, or torsion, more often, as in our reported case, it is an incidental finding without associated symptoms.

The incidence of ectopic liver has been reported as less than 0.5%, and the incidence of an accessory liver lobe is less than 0.1% [7]. Because of its rarity, few case series exist and most reports on this anomaly are single cases and occasional autopsy series. In the absence of trauma (surgical or nonsurgical), most cases of ectopic liver are thought to be congenital in origin. Liver development begins in the fourth week of gestation when the liver bud arises as a ventral outgrowth of the most caudal portion of the foregut. Rapid growth of the liver occurs over the next several weeks, with development of the hepatic sinusoids from the pars hepatica and the biliary tracts from the pars cystica. Hypothetic explanations for ectopic liver include the following: (1) development from a second liver bud; (2) development from the original liver bud, with migration of cells to form an accessory liver that is connected to the original liver by a stalk; (3) incomplete atrophy or regression of developing liver lobes; and (4) migration of nests of hepatic cells outside the developing liver.

Ectopic liver may have the appearance of a neoplasm on conventional imaging, and often the correct diagnosis is only made after histopathology examination. Wang and coworkers [5] retrospectively noted that the computed tomography features of ectopic liver were similar to normal hepatic parenchyma in a case of intrathoracic accessory liver lobe. In our case, trans-

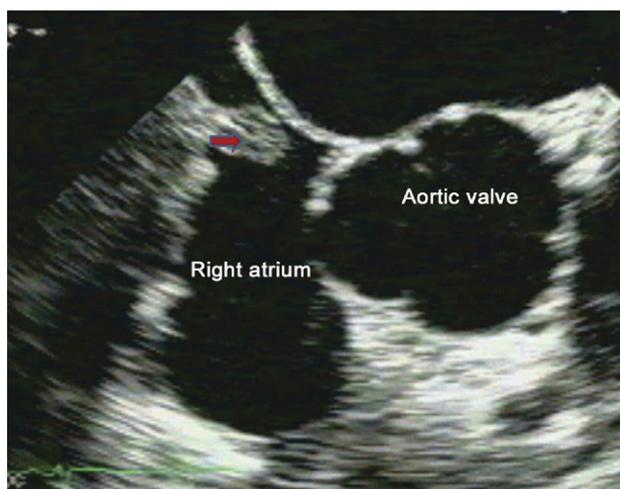


Fig 1. Intracardiac ectopic liver imaged with transesophageal echocardiography. Short-axis view demonstrates a mass (arrow) at the junction of the inferior vena cava and right atrium.

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