



# The Rib Sign, an Interesting TEE Image

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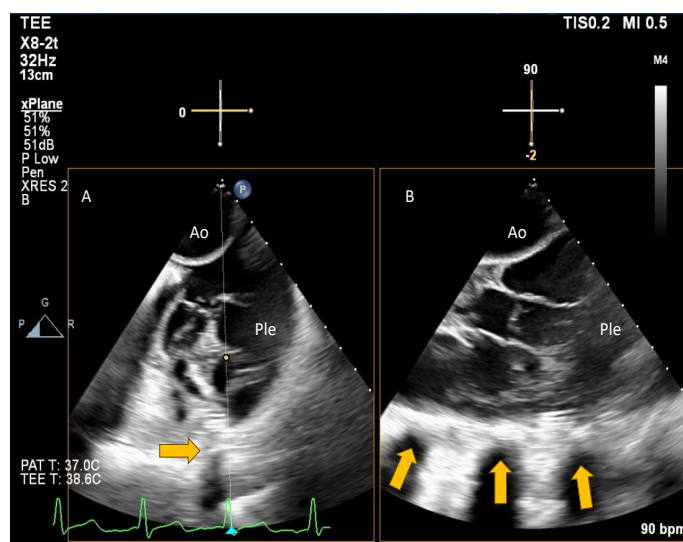
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## Clinical Image Description

On a normal lung ultrasound, the gas present in the airways and alveoli is a poor ultrasound conductor. Thus, the imaging window does not extend deep into the thorax. However, if ultrasound conductive pleural fluid is present, the ultrasound beam is able to penetrate deep into the thoracic cavity allowing visualization of the thoracic vertebrae. This “spine sign” is pathognomonic for a large pleural effusion [1,2].

We present a unique image showing a “rib sign” taken from a Transesophageal Echocardiogram (TEE). The patient had previously undergone coronary artery bypass grafting with left internal mammary artery harvesting. This procedure was complicated by post-operative bleeding from the left mammary bed resulting in a large left sided hemothorax. Repeat TEE imaging was performed to assist with patient management.



**Figure 1:** Panel A shows a TEE view of the left pleural effusion with blood and thrombus (PLe) and descending thoracic aorta (Ao). The “rib sign” is seen below the hemothorax in short axis (yellow arrows). Panel B is rotated by 90 degrees and shows the complex pleural effusion and a portion of the “rib sign” in long axis.



The left pleural space and the descending thoracic aorta is imaged as part of a standard TEE exam [3]. Normally, visualization of the chest wall is obscured by aerated lung. In this case, the pleural effusion was so large and contained ultrasound conductive material (blood and thrombus), that clear visualization from our echo probe (posterior) to the ribs (anterior) was seen on TEE imaging. We term this the “rib sign”.

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