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Crista terminalis mimicking a right atrial mass in a term pregnancy

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Case Report

A 32 year old woman undergoing her third pregnancy presented for an elective induction at 40.4 weeks. A growth scan was performed. An echogenic structure measuring 3.6 x 3.9 mm was noted in the right atrium while exploring the four chamber view, in an otherwise normal fetal heart. The mass seemed to have the same echogenicity as the adjacent atrial tissue (Figure 1.)

The location of the mass in the upper part of the right atrium was suggestive of a prominent crista terminalis which was reassured in the sagittal view, where a “band-like” structure in the posteriolateral region of the right atrium could be observed. (Figure 2).

Follow-Up

The diagnosis was confirmed with a postnatal echocardiogram, where the structure was also seen.

Discussion

The right atrium has certain embryonic structures during fetal life that are present to direct highly oxygenated blood from the umbilical veins and inferior vena cava through the foramen ovale. These benign entities include: Chiari network, crista terminalis, Eustachian valve, and the Thebesian valve. Current imaging equipments result in higher image quality, allowing to identify these strucutres when present. The crista terminalis is a fibromuscular prominence located at the confluence of the sinus venosus and the primitive right atrium, it can be traced from the superior vena cava to the inferior vena cava, adyacent to the lateral wall of the right atrium. The differential diagnosis includes other benign embrionic structures as well as cardiac tumors and thrombi.

Conclusion

Knowing the existence of cardiac primitive structures is essential to make an accurate differential diagnosis.



Figure 1. Echogenic structure in the right atrium.

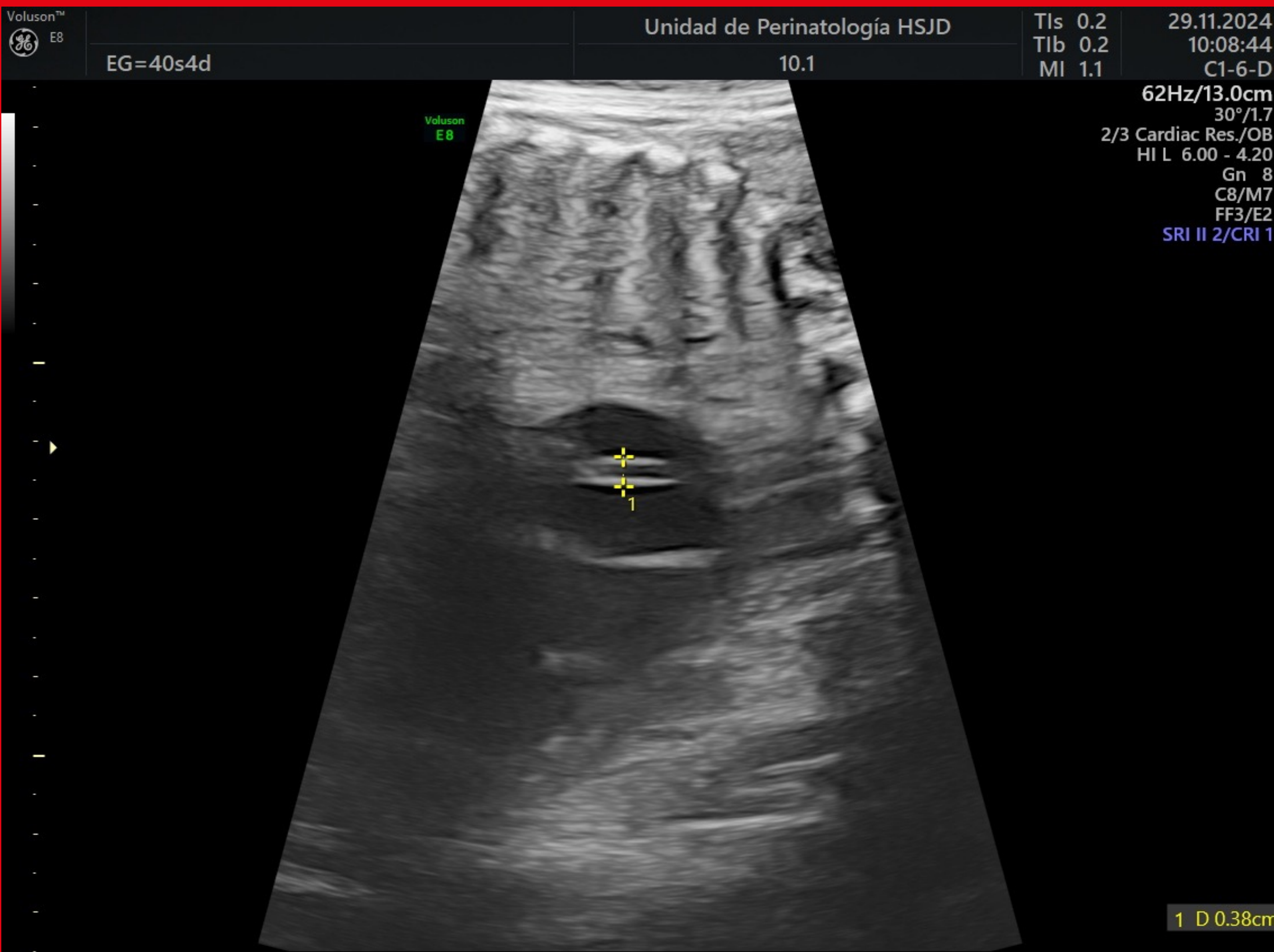


Figure 2. Band-like structure in the right atrium.