

Lipomatous Hypertrophy of the Interatrial Septum (LHIS)

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Description

A 72 year old female patient presented to the emergency with abdominal pain. Contrast enhanced CT scan of the abdomen and the pelvis was ordered [1]. The CT of the abdomen and pelvis was unremarkable, however in the included portion of the chest a mass lesion was present involving the region of the atrial septum. The lesion had characteristic dumbbell shape sparing the fossa ovalis (Figure 1) and measured 92 Hounsfield units (Figure 2) which denotes presence of macroscopic fat (- 60 to - 120 HU). A diagnosis of Lipomatous hypertrophy of the interatrial septum (LHIS) was made. The ordering physician and the patient were assured to the benign nature of this process [2-4].

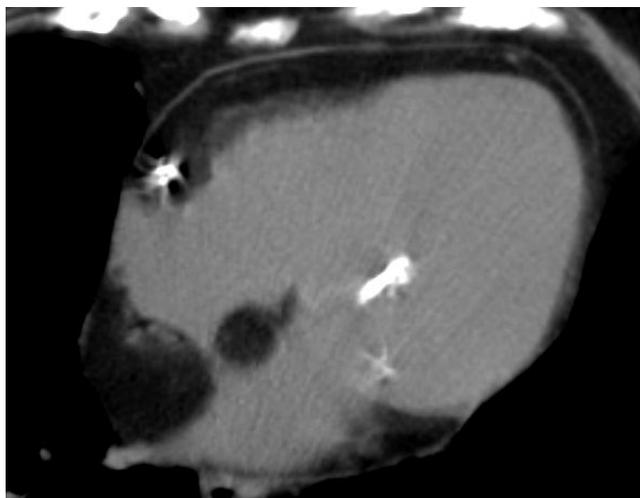


Figure 1: LHIS showing characteristic dumbbell shape sparing the fossa ovalis.

Lipomatous hypertrophy of the interatrial septum (LHIS) is an increasingly identified incidental pseudotumor. It has pathognomonic imaging features and usually should not require additional imaging. It is hypothesized that it is due to entrapment of fat cells in the atrial septum during embryogenesis which hypertrophy with age giving the characteristic appearance. Hence, the increased incidence with age and obesity. Some studies had linked (LHIS) to increased risk of coronary artery disease. It is usually an incidental finding. Rarely, it has been associated with atrial arrhythmias and heart block and on these occasions it may require resection [5,6].

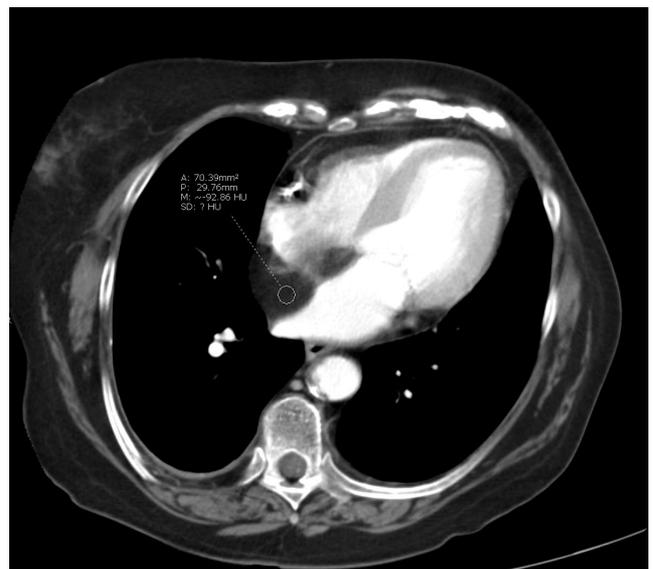


Figure 2: The lesion measured 92 Hounsfield units which denotes presence of macroscopic fat.

Lipomatous hypertrophy of the interatrial septum (LHIS) can also be easily diagnosed on other cross sectional modalities imaging modalities. On Magnetic resonance imaging LHIS has high signal on T1WI and T2WI with low signal on T2WI with fat suppression. On echocardiography it usually appears as an isoechoic globular mass sparing the fossa ovalis. On FDG PET LHIS shows increased uptake in the right heart and correlation with structural imaging is need to avoid misinterpretation as malignancy [7].

The importance of this diagnosis is not to be confused with other lesions that may occur in this part of the heart including but not limited to lipoma, liposarcoma, teratoma, myxoma or other benign tumors of the heart and avoid unnecessary investigations and anxiety to the patient and the ordering physician.

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