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IMAGES IN CARDIOLOGY

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Congenital foramen of the left pericardium masquerading as left ventricular aneurysm

A 69 year old woman was referred for coronary artery bypass surgery following coronary angiography which revealed triple vessel disease. Left ventriculogram was reported as "left ventricular aneurysm" (panel A). However, on close observation of the cine ventriculogram, the "aneurysm" could be seen to contract during systole.

A revised diagnosis of congenital foramen of the left pericardium was made. This was confirmed at the time of surgery (panel B). The left atrial appendage and part of the lateral wall of the left ventricle was herniating through the defect.

The latter was extended in the cephalad direction to accommodate the left internal mammary artery pedicle used to bypass the left anterior descending coronary artery.

Congenital foramen of the left pericardium is rare. To date less than 50 cases have been described in the literature. It is

believed that the defect is caused by a tear in rather than a failure of the pleuro-pericardial membrane to close. Common presentations include angina, dyspnoea, myocardial infarction, syncope, and occasionally death. A third of patients are asymptomatic. The defect is sometimes visible on plain chest radiograph. ECG may reveal ST segment abnormalities suggestive of coronary insufficiency caused by impingement of the rim of the defect on the coronary tree.

The diagnosis is confirmed by echocardiography or during left ventricular cinegram. Magnetic resonance imaging and thoracoscopy have also been employed to confirm the diagnosis. The management is directed to prevent incarceration of the myocardium. The defect can either be closed or enlarged surgically as described above.

T BinEsmael
H Luckraz
A Azzu

heymanluckraz@aol.com

Left ventricle cinegram showing the herniated left ventricular wall through the pericardial defect.

Intraoperative photograph showing the small congenital foramen of the left pericardium. N, neck of pericardial hernia.