Mid ventricular ballooning in takotsubo cardiomyopathy: from a concealed to a manifest form

Myocardial bridging occurs when one of the coronary arteries (left anterior descending coronary artery, cicumflex artery and right coronary artery) tunnels through the myocardium rather than resting on top of it. Typically, the arteries rest on top of the heart muscle and feed blood down into smaller vessels that populate throughout the myocardium. But if the muscle grows around one of the larger arteries, then a myocardial bridge is formed. As the heart squeezes to pump blood, the muscle exerts pressure across the bridge and constricts the artery. This defect is present from birth. It can lead to uncomfortable, powerful heartbeats and angina. The incidence of the condition in the general population is estimated at 5% based on autopsy findings, and is possibly a significant cause of takotsubo syndrome (or reversible cardiomyopathy), if left anterior descending coronary artery is the concerning vessel.

If the left anterior descending coronary artery is large and exceeds to the inferior wall of the myocardium apical ballooning (dyskinesia of the apical region of the left ventricle) is usually found.

If left anterior descending coronary artery is rather small not exceeding to the inferior wall of the myocardium mid ventricular parts of the left ventricular are afflicted. This applies usually for 14% of cases with takotsubo syndrome (or reversible cardiomyopathy).

A concealed form of takotsubo cardiomyopathy is found at the same conditions with the picture of either anterior or inferior minor contraction (hypokinesia) of the left ventricle.

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