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## Mitral valve blood cyst causing transient LVOT obstruction: A diagnostic approach using exercise stress echocardiography

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**Introduction:** Valvular cysts are benign cardiovascular tumors found incidentally on autopsy in infants. Though common in newborns, valvular cysts typically disappear spontaneously during infancy and are a very rare finding in adults. This case discusses the approach we used to manage a mitral valve cyst in an adult.

**Case:** Forty seven (47) year old female with hypertension presented with intermittent, non-exertional, left-sided chest pain for three days. Vitals showed a blood pressure of 188/88. Electrocardiogram, chest X-ray, laboratory values and troponins were within normal limits. Transthoracic echocardiogram identified an 11 millimeter by 9.5 millimeter chordal mitral valve cyst not causing any regurgitation or obstruction across the mitral or aortic valves (Figure 1). Ejection fraction preserved: Given the rare nature of her pathology and associating chest pain, a decision was made to perform an exercise stress echocardiogram to measure gradients across the left ventricular outflow tract and mitral valve to rule out obstruction. Exercise stress echocardiogram showed a mitral valve cyst which transiently obstructed the left ventricular outflow tract only during exercise. The patient reached target heart rate without chest pain and no evidence of coronary ischemia. Due to the mild nature of the patient's symptoms, a decision was made not to pursue cardiac surgery for cyst removal.

**Conclusion:** Valvular cysts are rare and there are currently no guidelines for management. Exercise stress echocardiography allows evaluated LVOT and MV obstruction. This case highlights a diagnostic approach using exercise stress echocardiography to guide therapy when MV cysts are detected.