

ANSWER

The patient had constrictive pericarditis. The m-mode tracing shows the following important findings (Mahmoud A, Bansal M, Sengupta PP. Curr Cardiol Rep 2017;19:43)-

- Respirophasic variation in septal position- the interventricular septum is moving towards the left ventricle during inspiration and towards the right ventricle during expiration resulting in changes in the right and left ventricular cavity sizes with respiration (double headed arrows in the figure below). This respirophasic ventricular septal shift occurs because of exaggerated ventricular interdependence and is reported to be one of the most sensitive (93%) echocardiographic features of constrictive pericarditis (Welch TD, Ling LH, Espinosa RE et al. Circ Cardiovasc Imaging 2014;7:526-34.
- In addition to the respirophasic changes in septal position, the ventricular septum also shows oscillatory motions during diastole, termed as 'septal shudder' or 'septal bounce' (empty arrows below). This septal bounce occurs during each cardiac cycle, regardless of the phase of respiration. This occurs due to the combined influences of ventricular interdependence and temporal differences in left and right ventricular filling and is also highly suggestive of constrictive pericarditis.
- Posterior pericardium is thickened and is highly echogenic (solid arrow).

