

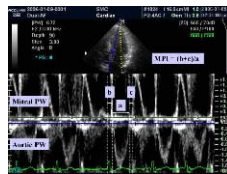
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A Novel Technique for assessing myocardial performance index in atrial fibrillation: Dual pulse wave Doppler method.

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Background : The myocardial performance index(MPI) is well known parameter for evaluating global systolic function. But it cannot be calculated in atrial fibrillation(AF) either by pulsed wave(PW) doppler method nor by tissue Doppler method because of ambiguous or absence of A and a' wave. **Objective :** We developed Dual pulsed wave doppler method which enabled us to obtain both mitral and aortic PW at the same cardiac cycle including surface ECG from apical 5 chamber view. We planned to determine this method are feasible and reliable in assessing MPI in AF. **Methods :** The isovolumetric contraction time (ICT) was measured from onset of QRS on surface ECG to the onset of aortic PW, the ejection time (ET) from the onset to the end of aortic PW, and the isovolumetric relaxation time (IRT) from the end of aortic PW to the onset of mitral PW. We calculated MPI repeatedly in 11 patients with AF up to 8 cardiac cycles. **Results :** We were able to calculate clearly MPI in all patients. Intraclass correlation coefficient(ICC) for the MPI was 0.84 (95% confidence interval (95% CI), 0.71-0.94), for ET 0.90 (95% CI, 0.80-0.97), for ICT 0.88(95% CI, 0.76-0.96) and for IRT 0.73(95% CI, 0.53-0.90); all p value < 0.01. But heart rate showed poor agreement which reflect variation of cardiac cycle length in AF(ICC= 0.47 (95% CI, 0.24-0.74)). **Conclusion :** Dual PW doppler method enabled us to calculate the MPI even on AF. MPI obtained from this method may help to assess on systolic function in AF.



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A primary aorto-esophageal fistula due to thoracic aortic pseudoaneurysm : case report and review of literature

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Aorto-esophageal fistula(AEF) is a rare but often lethal disease with a high mortality rate. These lesions are most commonly seen in patients with thoracic aortic aneurysms, but they may occur as post-operative complications after cardiac surgery or stent-graft replacement. Early diagnosis and surgical intervention are mandatory for survival. Aorto-esophageal fistula due to thoracic aortic aneurysm is an uncommon cause of gastrointestinal bleeding and has an extremely poor prognosis. This is a case report of 77-year-old woman with AEF. Patient visited in our emergency room and complained small amount hematemesis. We found abnormal lesion in mid esophagus during esophagogastroduodenoscopy. We checked chest computed tomography that show abnormal communication between out-pouching aneurysm in subaortic portion of ascending aorta and esophagus. aortic patch repair was done.