

Point-of-care echocardiography

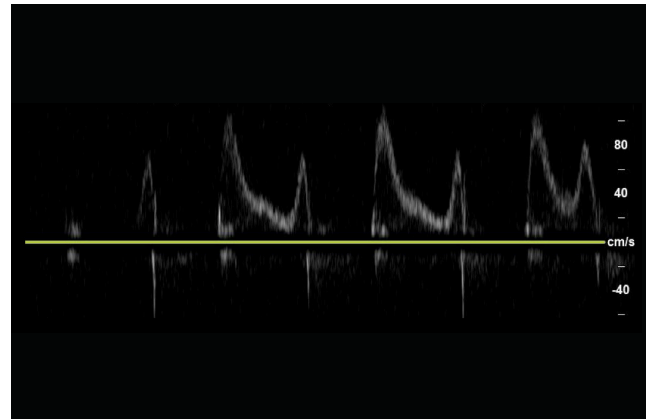
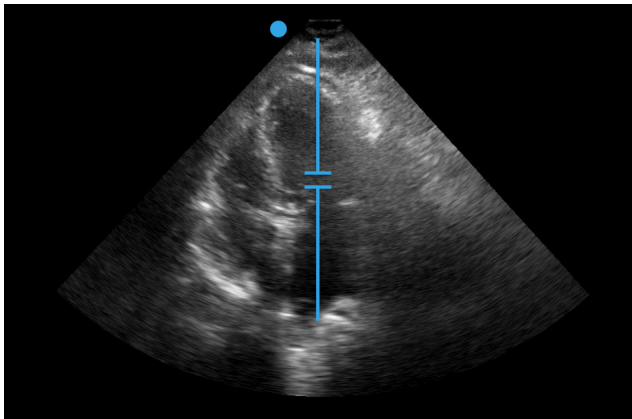
EVALUATING DIASTOLIC FUNCTION

Evaluating for diastolic dysfunction may be helpful in patients with suspected heart failure but normal systolic function, and in patients with unexplained dyspnea.

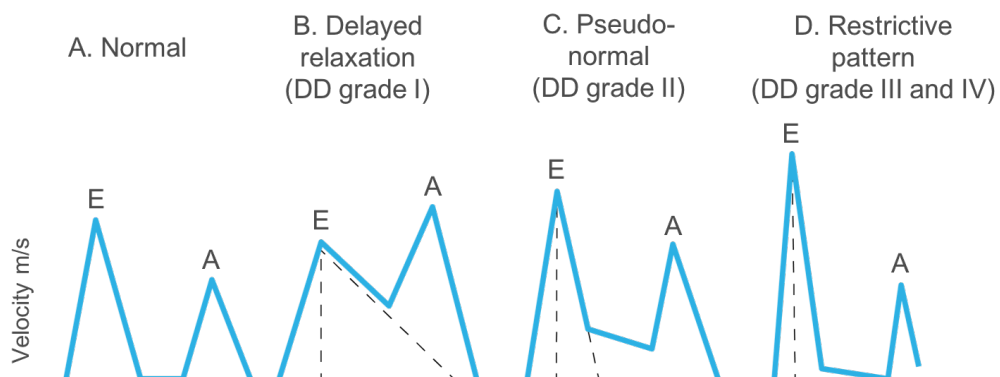
Diastolic function can be evaluated using a Doppler assessment of the mitral inflow, and tissue Doppler measurements of the septum or lateral wall.

Mitral inflow

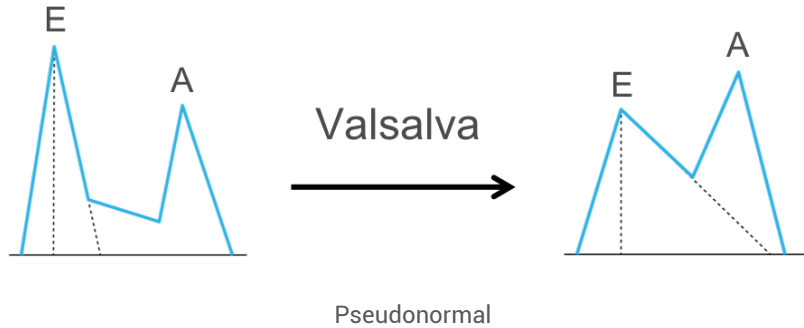
Place a pulse wave Doppler gate in position to measure inflow, and obtain a waveform tracing.



There are basic patterns of mitral inflow that correspond to diastolic function. The E wave indicates passive filling, and the A wave represents the atrial kick.



The E wave is greater than the A wave in all but the delayed relaxation pattern. To help distinguish subtypes, we use the E:A ratio and examine the effect of having the patient perform a Valsalva maneuver.



Performing Valsalva will cause the A wave to grow larger than the E wave for pseudonormal and reversible restrictive patterns, but not for the irreversible restrictive pattern.

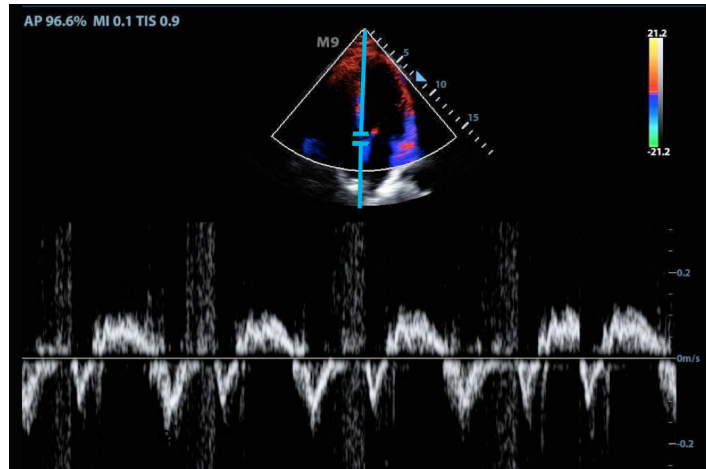


In restrictive patterns, the E:A ratio will be 2:1 or greater. This helps distinguish between pseudonormal and reversible restrictive patterns.



Tissue Doppler (TDI)

TDI of the septum and lateral wall can also help characterize diastolic function.



TDI patterns can be used with mitral inflow to calculate E/e' values, and determine the degree of diastolic dysfunction.

