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CARDIAC

MV-PHT

MITRAL VALVE PRESSURE HALF TIME (MV-PHT)

Mitral Valve Pressure Half-Time (MV-PHT) is defined as the time needed for the peak pressure gradient to fall to half its value across the mitral valve.

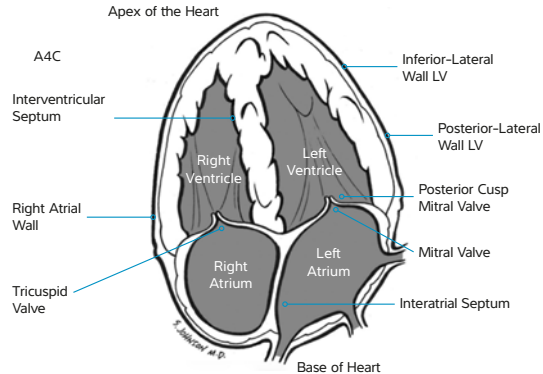

Fig. 1

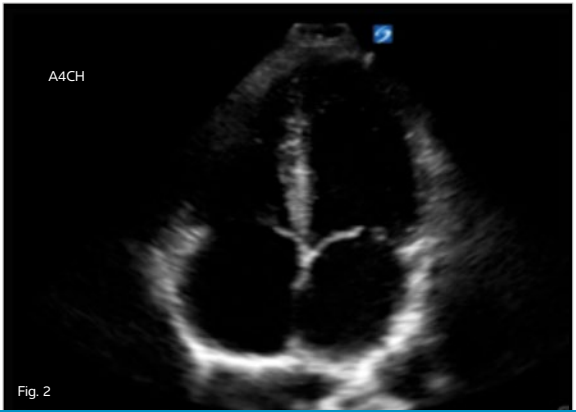

Fig. 2

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CARDIAC

MV-PHT

MITRAL VALVE PRESSURE HALF TIME (MV-PHT)

As the Pressure Half Time (PHT) is halved the velocity becomes equal to the peak velocity across the mitral valve divided by the square root of 2. As blood flows easier across the valve the pressure gradient falls. Narrowing of a valve as in Mitral Stenosis will lead to a high diastolic PHT, while wide regurgitant valve areas will lead to a low diastolic PHT.

PHT is directly proportional to the Deceleration Time (DT).

Performing measurement:

- Obtain an A4C view of the heart. (Fig. 2).
- Place the sample gate at the level of the MV on the ventricular side. (Fig. 4) activate (PWD).
- Freeze the PWD strip to optimize the best tracing of the mitral valve. Under the calculation (Calc) package chose MV, then PHT.
- Place the first caliper at the peak E wave, adjust the second caliper toward the baseline following the same angle as the E wave slope (Fig. 4) – Save Calculation.

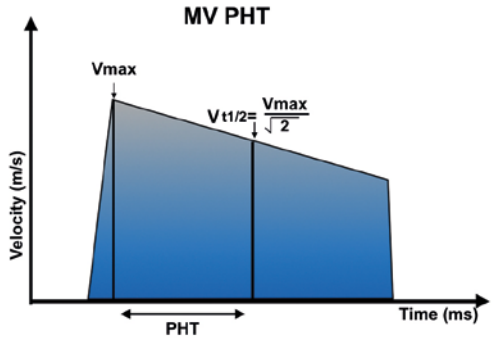

Fig. 3

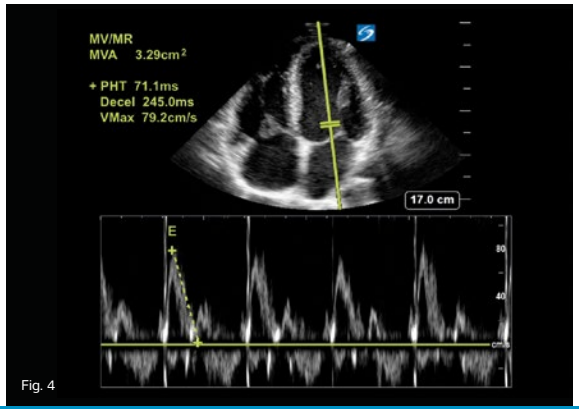

Fig. 4