Twitter Thread by Asbjørn Støylen



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@strain_rate

1/ #LBBB generates often a classical pattern on #EchoFirst. The pattern is very distinctive in Tissue Doppler of the septum.

The classical pattern arises from the time lapse of the activation and relaxation of the two walls, creating a pattern of interaction due to a sequence temporal imbalances of the tension between the two walls.

2/ As the septum is activated first, it contracts (shortening - septal flash) without activation of the lateral wall, which stretches. This generates slower pressure build up than a normal IVC, which then is prolonged.

3/ During ejection, the LV volume decreases, so both walls shorten. Tension, however, declines first in the septum, as this was activated first. This leads to a tension imbalance, so the lateral wall continues to shorten, the more relaxed septum stretches.

4/ The stretching of the septum builds up an elastic tension in the septum, which is released as recoil, when tension declines in the lateral wall, showing a post systolic shortening in the septum which is due to elasticity.

5/ This classical pattern is also very evident in the strain curves, and an integrated strain analysis will show this, in a semi quantitative way describing how work is wasted by looking at the opposing wall. https://t.co/8DS2F1S0BW

6/ This classical interaction pattern explains all changes seen in apical velocities (apical rocking), basal velocity curves, strain and strain rate.

7/ Applying estimated LV pressure do not add information, simply because the pressure curve is the same for both walls, so the different strain-pressure loops arises from plotting different strain curves against the same pressure curve, the differences lie in the strain.

This is the CLASSICAL pattern. This is dependent on a normally functioning lateral wall (except for the delay) https://t.co/fQ83cMGI3k

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