Septal flash

- also known as **septal beaking**, is a sign of interventricular dyssynchrony seen on echocardiography or cinematographic cardiac CT/MRI.
- It represents an abnormal rapid movement pattern of the interventricular septum during pre-ejection systole (i.e. isovolumic contraction):
- septal motion towards the left ventricle ("posteriorly" or "leftward")
- septal motion away from the left ventricle ("anteriorly" or "rightward")

Pathology

- Mainly in left bundle branch block and right ventricular pacing, due to early activation of the interventricular septal myocardium.
- Normally, the interventricular septum moves slightly rightward during early systole, and leftward towards the center of the left ventricle during late systole, together with the other left ventricular walls. In this way, the circular contour of the left ventricle in the short axis is maintained throughout systolic contraction .
- With ventricular dyssynchrony, the septum is activated early in relation to the left ventricle, resulting in myocardial shortening and fast leftward movement. Immediately afterwards, the septum is paradoxically "pushed" rightward towards its presystolic position - this is thought to be due to force from the delayed left ventricular lateral wall activation [1].
- The net effect may be conceptualized as a distorted left ventricular morphology throughout systole (loss of normal circular short-axis contour [1]), signifying inefficient left ventricular function or impaired "squeeze".

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