



This House believes MVP SCD relates to diffuse myocardial fibrosis – opposition

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Consultant Electrophysiologist

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Professor of Cardiology

Norwich Medical School, UK

University of East Anglia



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NHS Foundation Trust

7th October 2022



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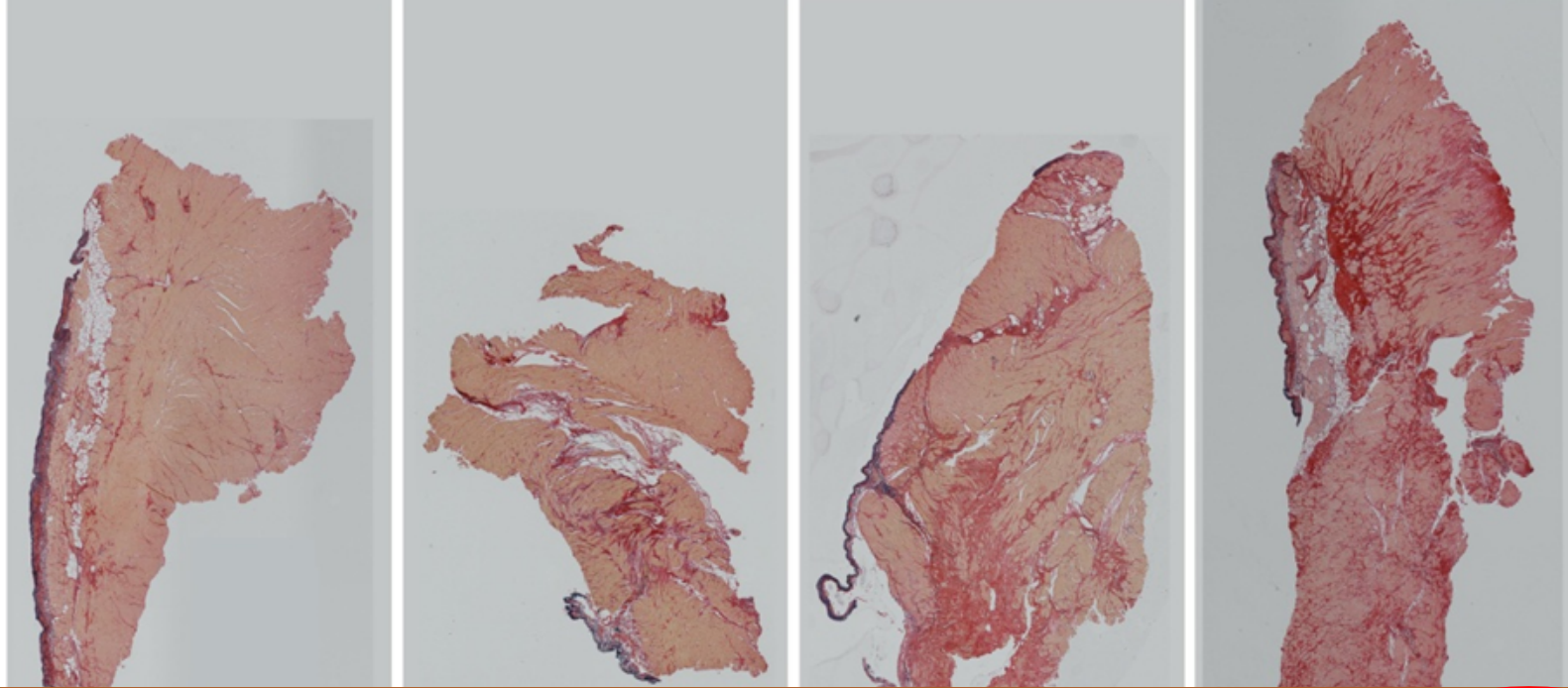
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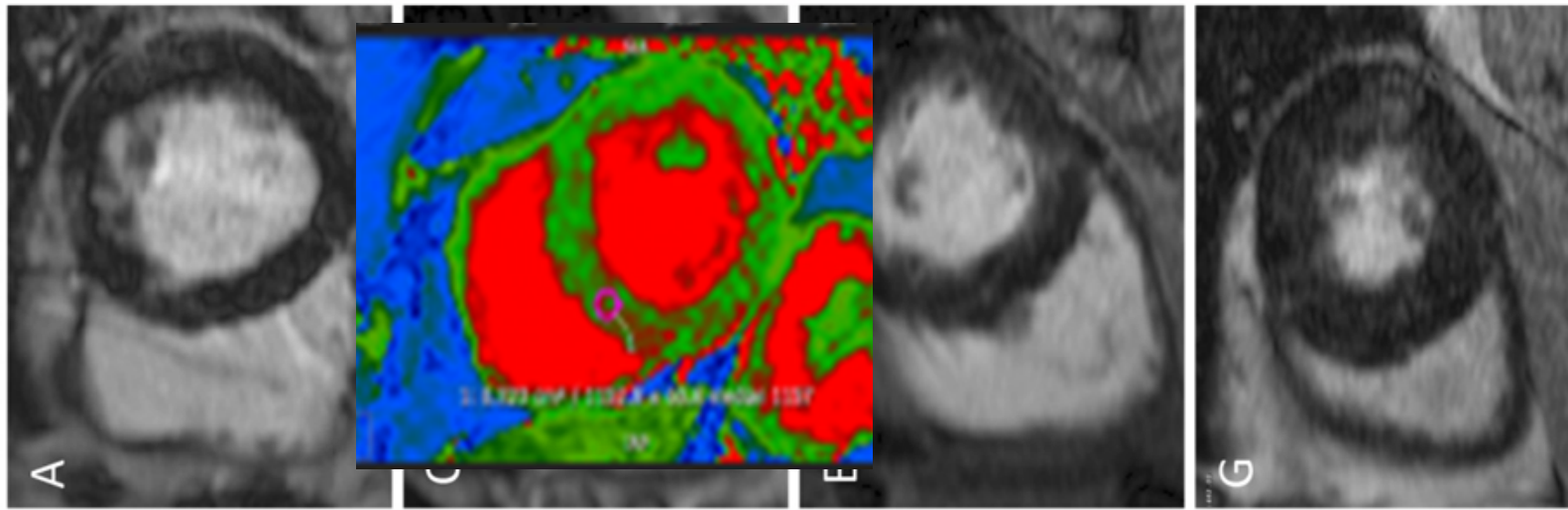
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Normal

Diffuse
Fibrosis

Focal
Fibrosis



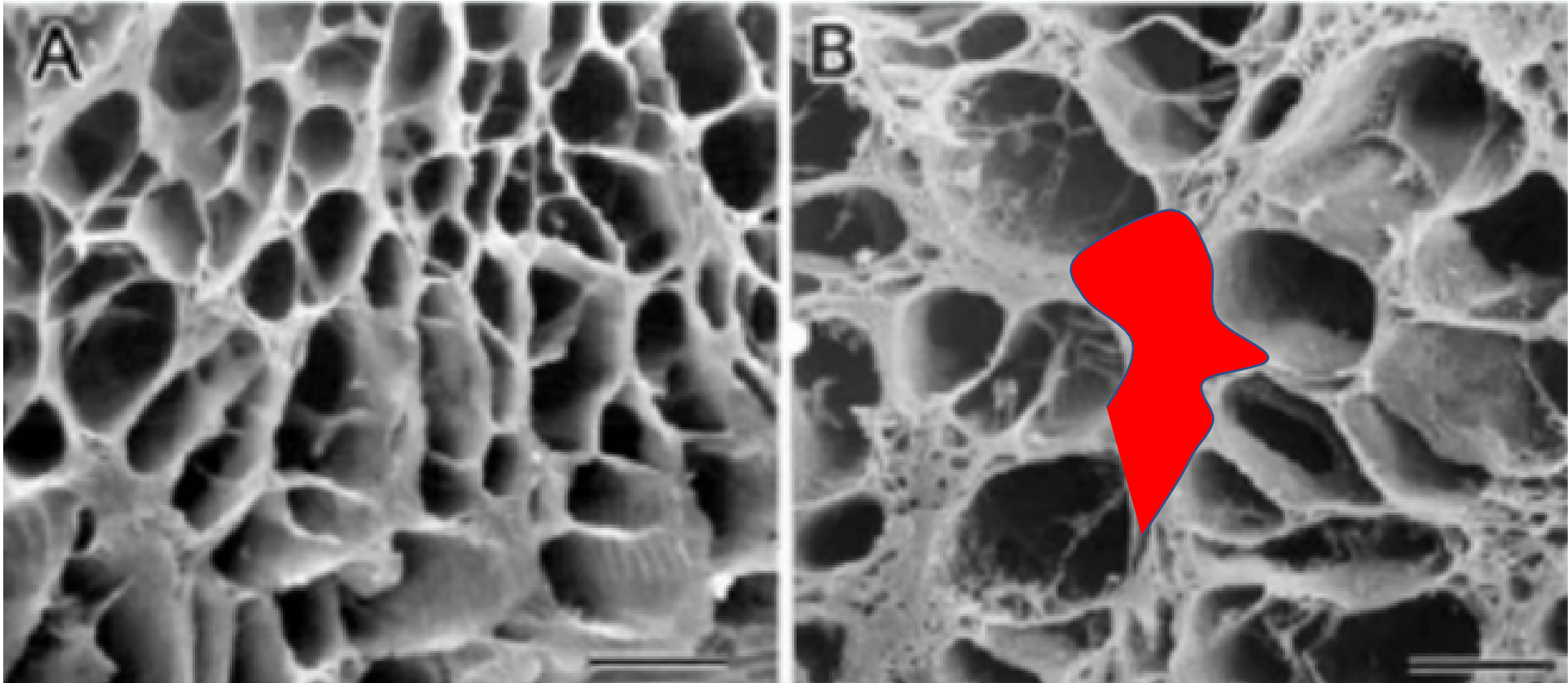
A

C

E

G

Extracellular Volume Expansion = surrogate for diffuse fibrosis

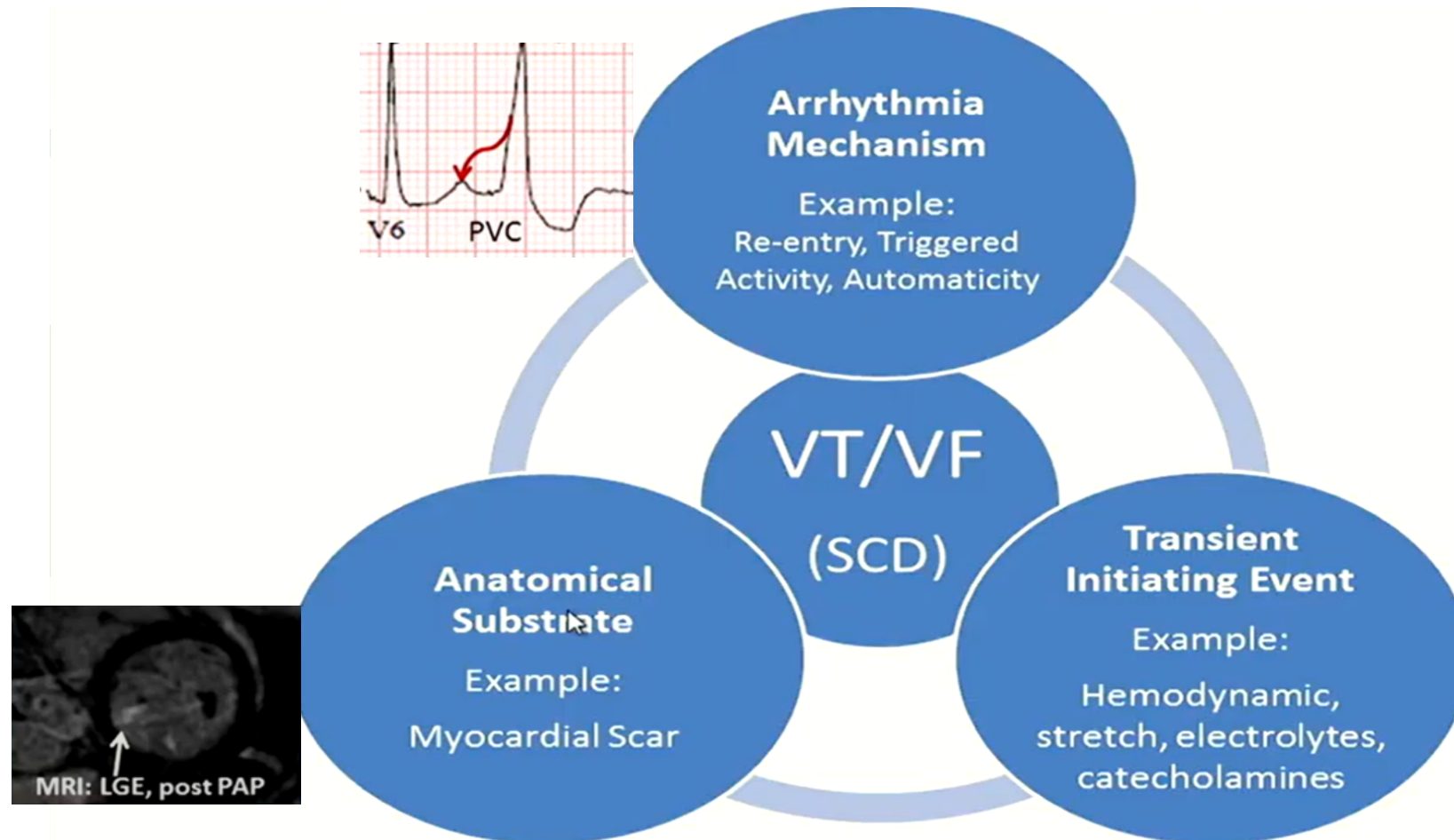


Electron microscopy image of normal volunteer on left and of a patient with severe aortic stenosis showing the diffuse fibrosis.

- Is there a Mechanism?
- Is there an Association?
- Association \neq Causation

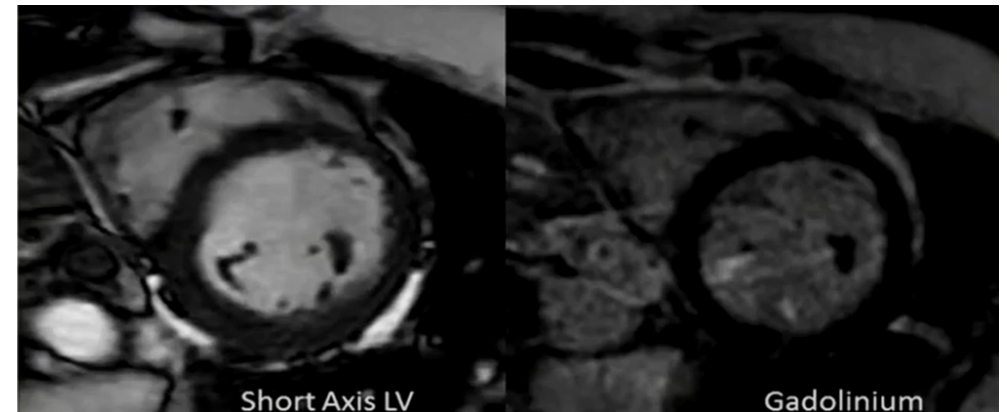


Interactions that precipitate SCD

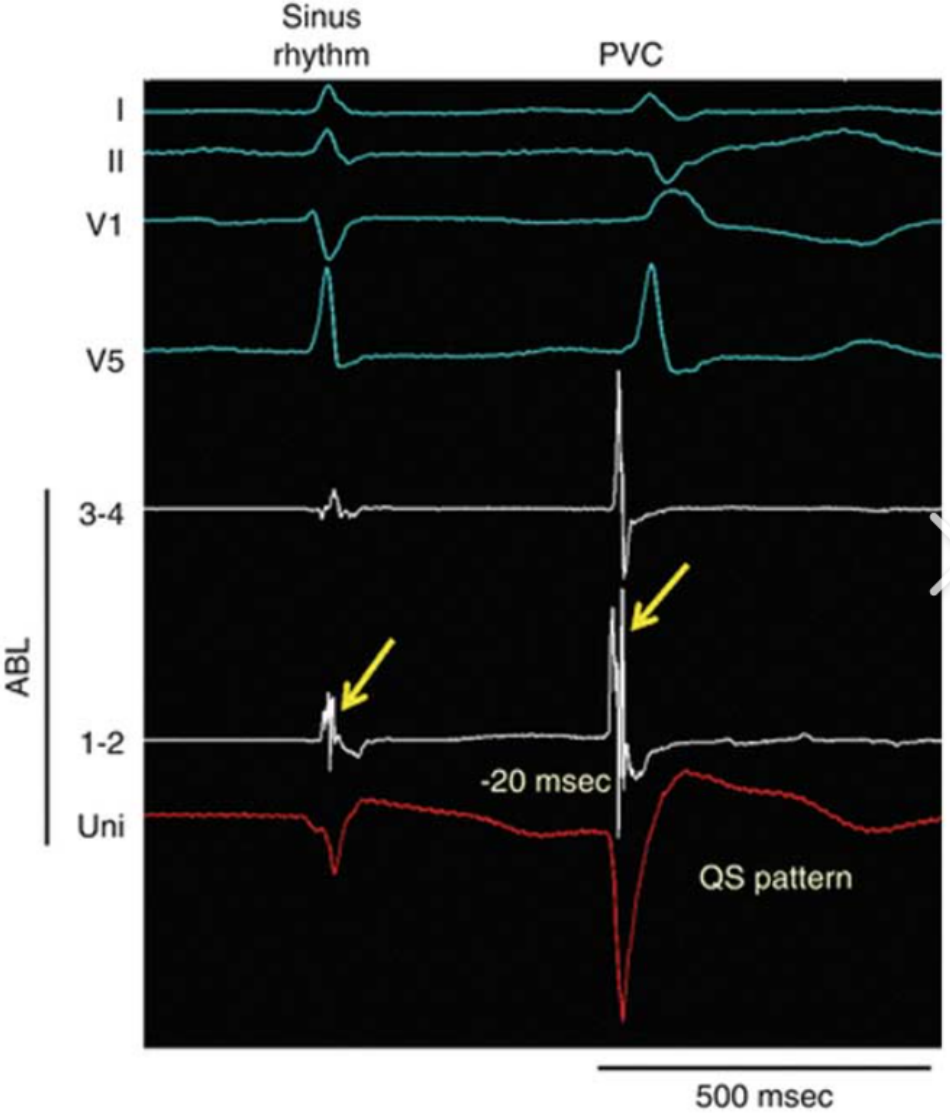
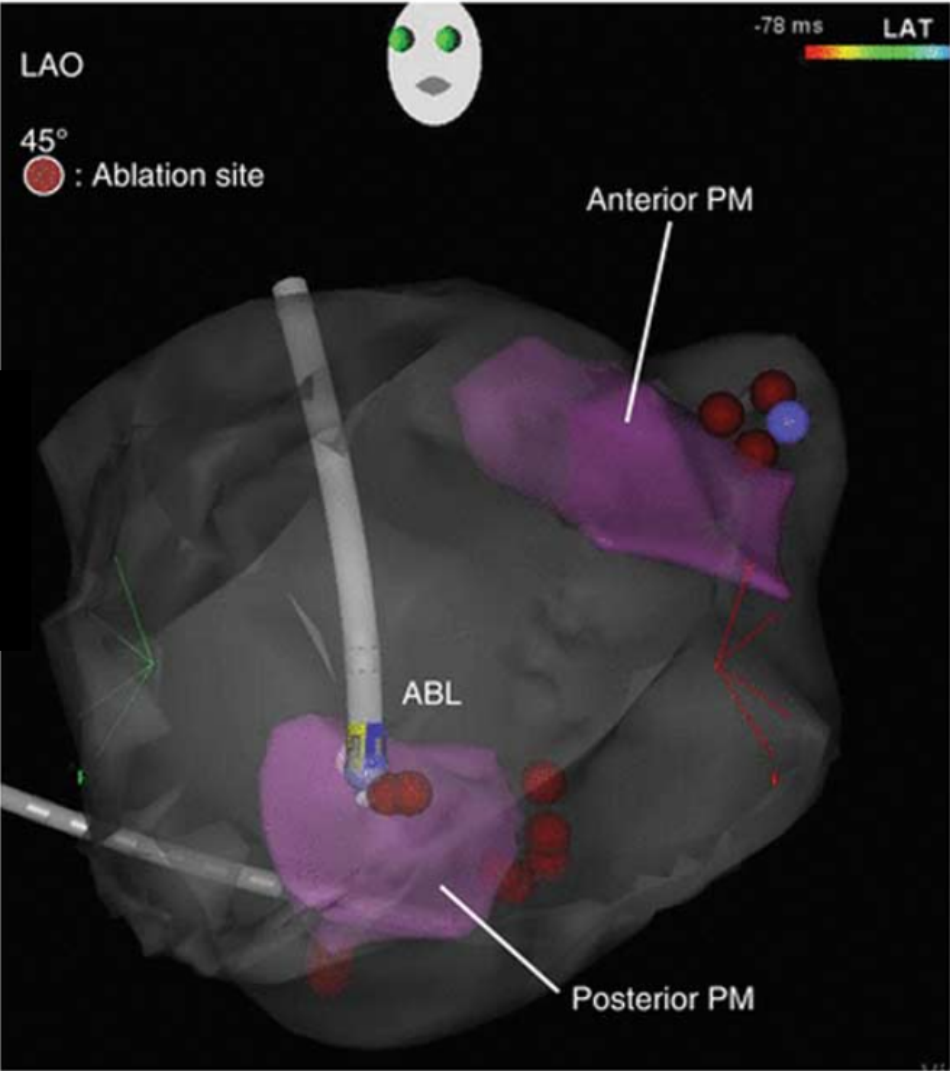


Case example

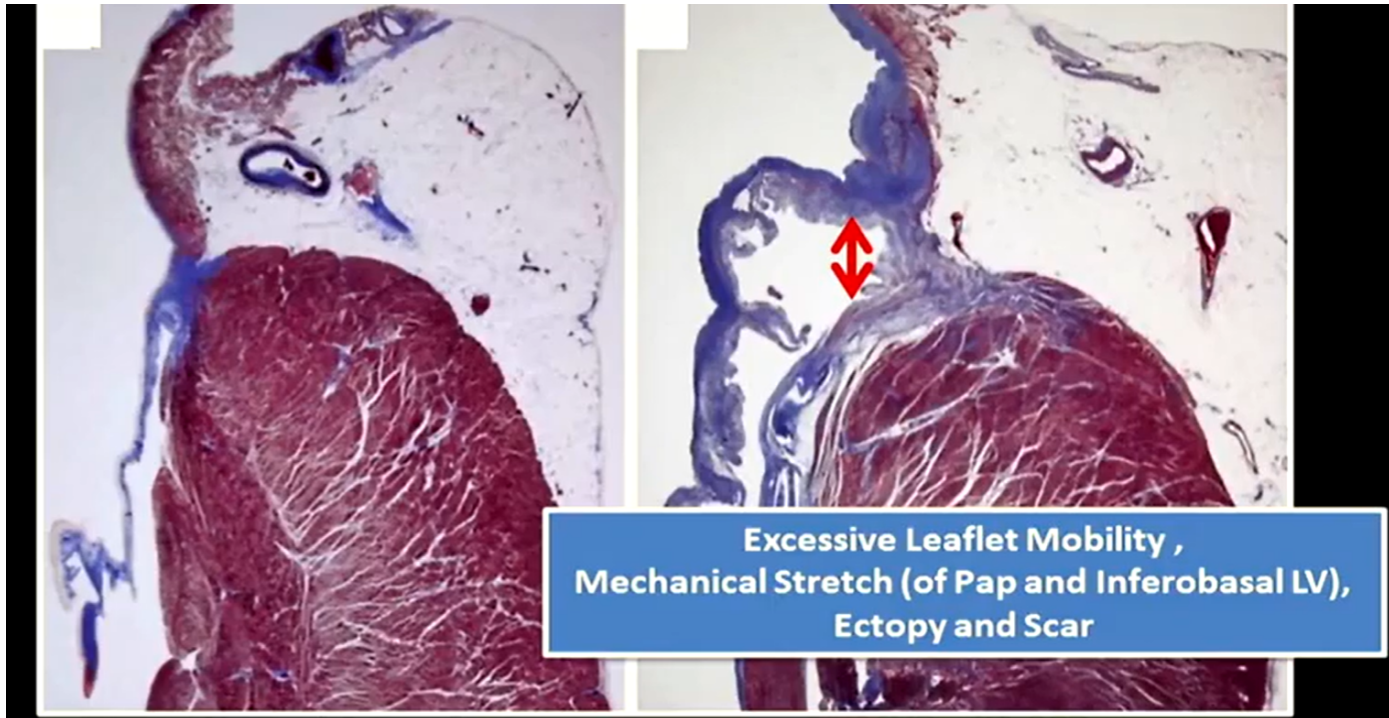
- 50 year old lady, presents with OOHVFA at a dance class
- Holter: frequent PVCs (34%), at least 2 morphologies, NSVT
- TTE: bi-leaflet prolapse, moderate MR, LV EF 46%
- MRI: focal scar at the tips of the postero-medial papillary muscle



Ablation of focal fibrosis eliminates PVCs

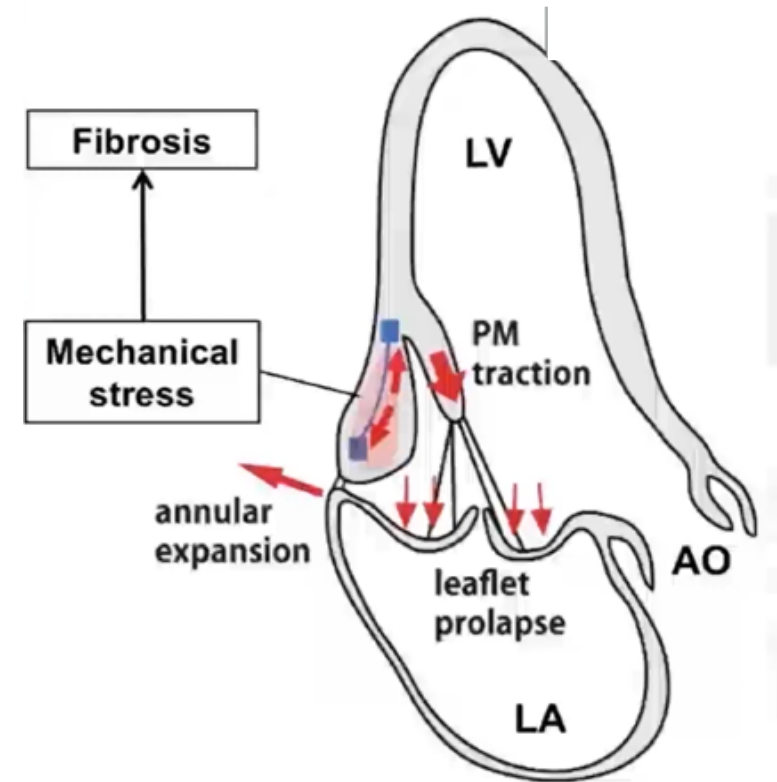


Stretch induced focal fibrosis as the initiating event

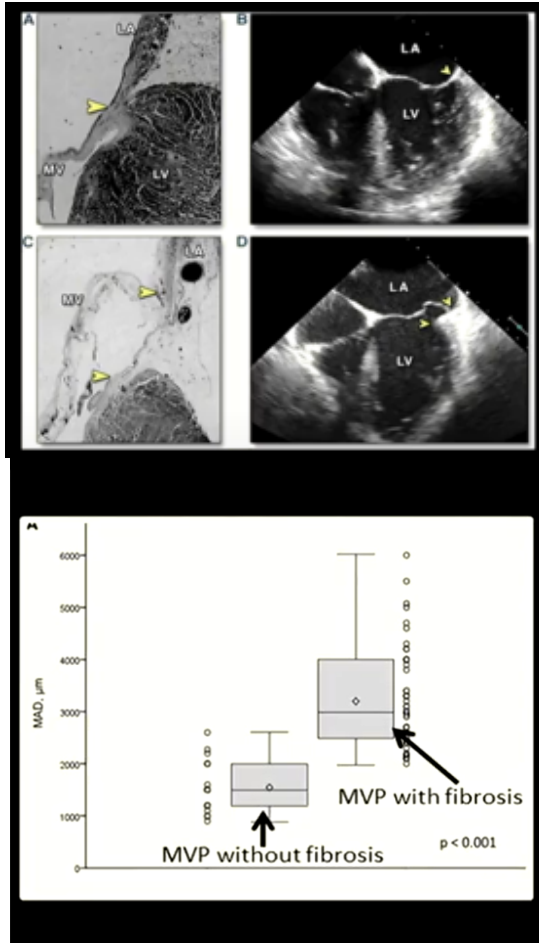


Normal control

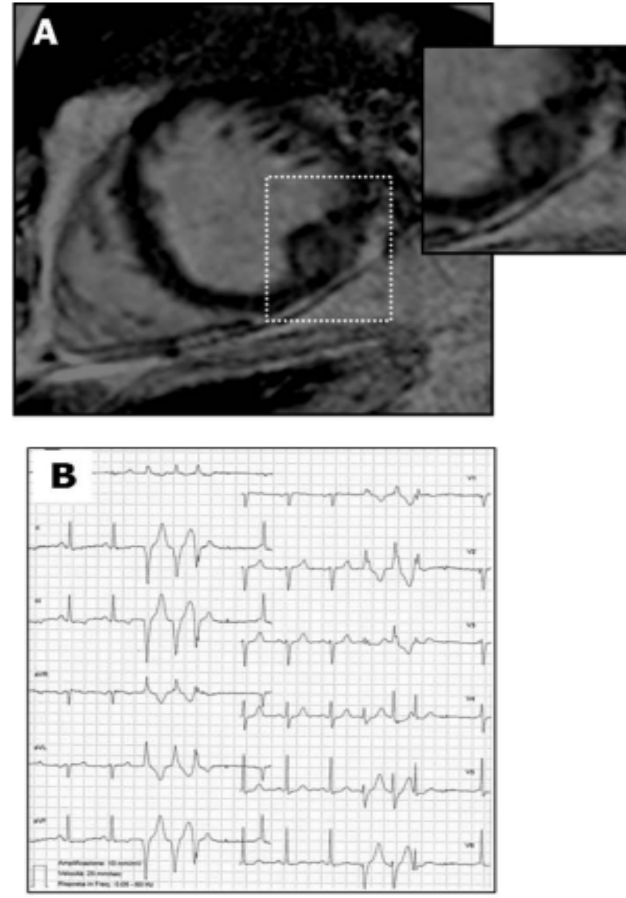
MVP with SCD



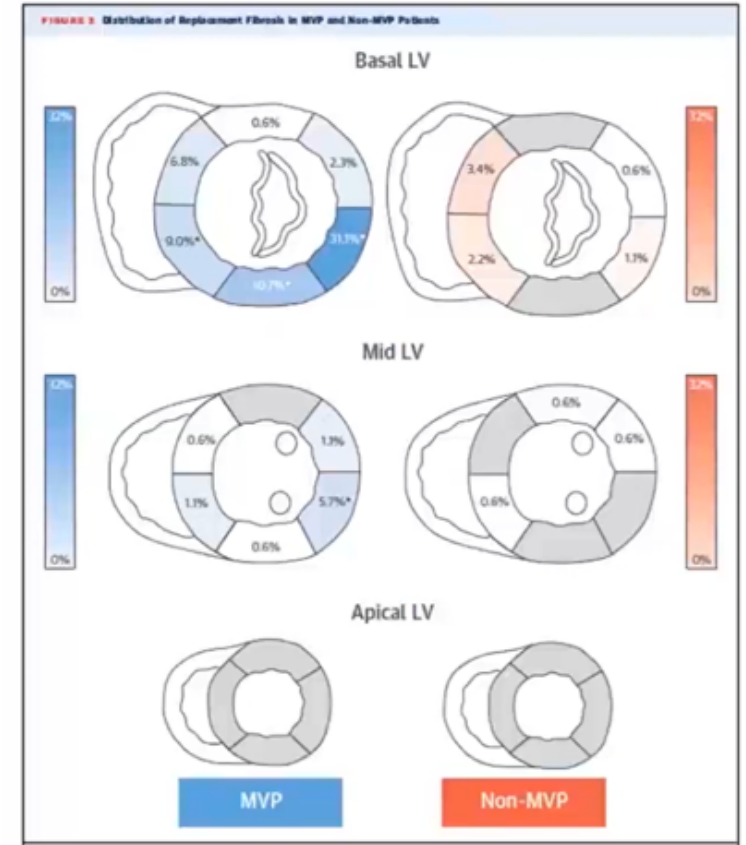
Link between arrhythmia and focal fibrosis



Parazzolo Marra et al



Basso et al, Circ EP 2015

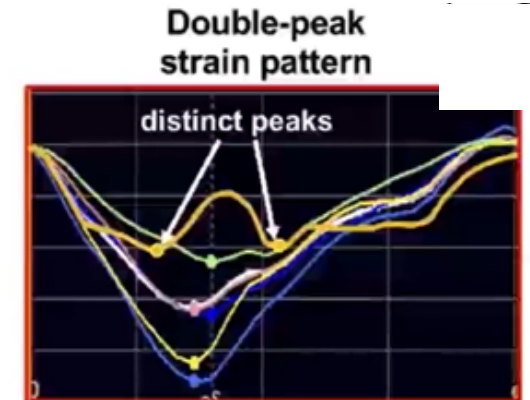
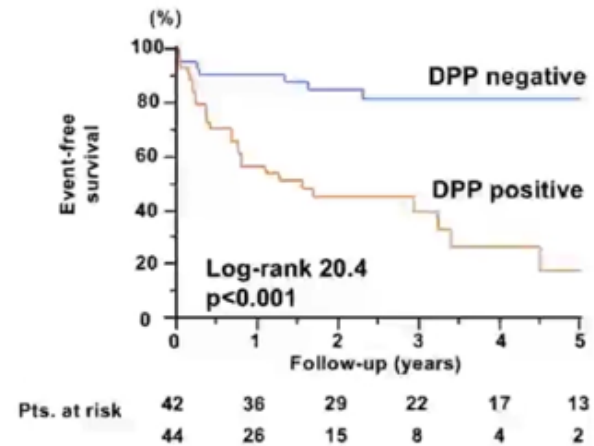
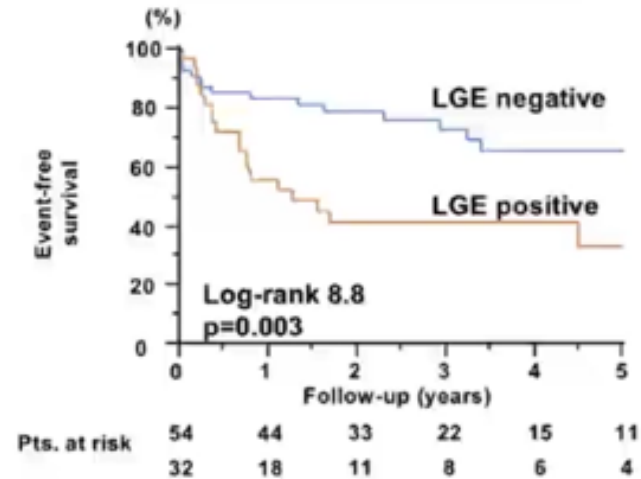


Kitkungvan et al, JACC 2018

Link between arrhythmia and focal fibrosis



Muthukumar et al, JAMA Cardiol 2020



Nagata Y, Levine RA et al ACC 2020

Thank You!
Vass and
Claire

