The ratatouille in a case of post-Rastelli procedure

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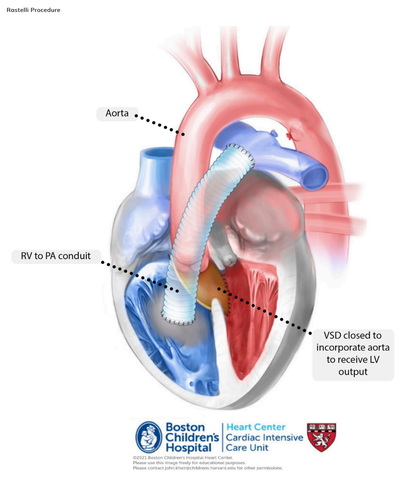
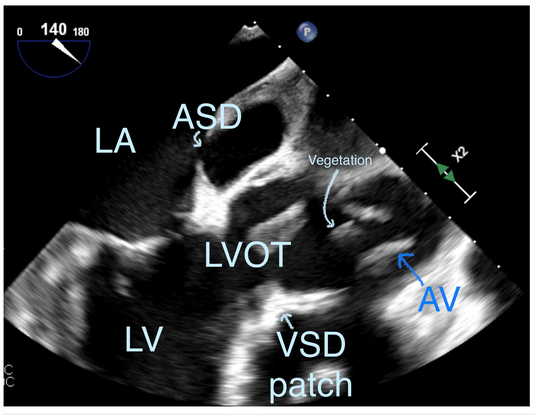


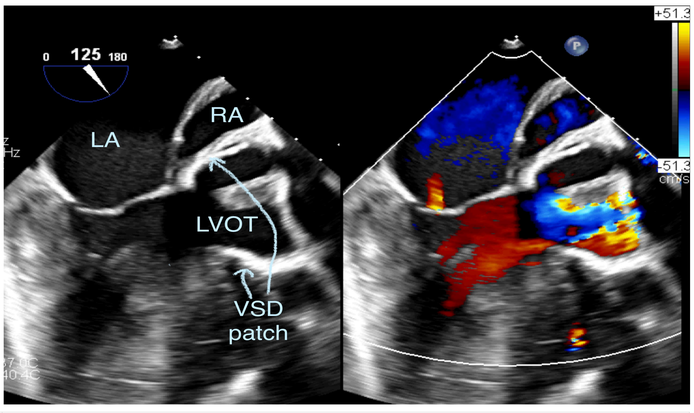
Background: A 30y.o. gentleman with known Rastelli procedure done, came in for AVR and PVR due to infective endocarditis.

Rastelli as a surgical repair for children born with transposition of the great arteries (TGA), VSD, and PS. It consists of an intracardiac baffle tunnels the left ventricle to the aorta, and an external valved conduit connects the right ventricle and the pulmonary artery.

Procedure findings: The LVOT is enlarged from a patch repair for the previous VSD, baffling the LV to the aorta. The residual LVOT muscle appears as an abscess cavity or pseudo-aneurysm of the aortic root in a general adult patient. Subsquent TEE ruled out the aboveThere is no residual VSD around the patch. There is a trivial MR.

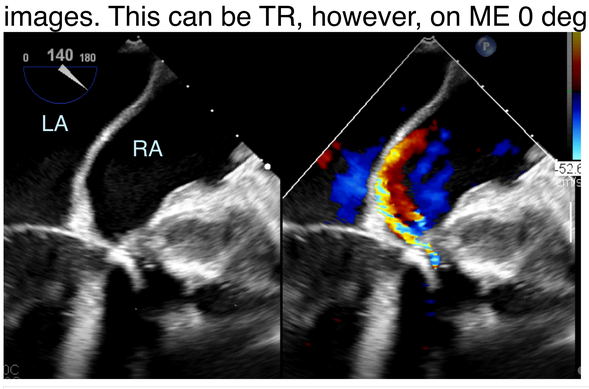


TEE at ME 140 degrees (left).

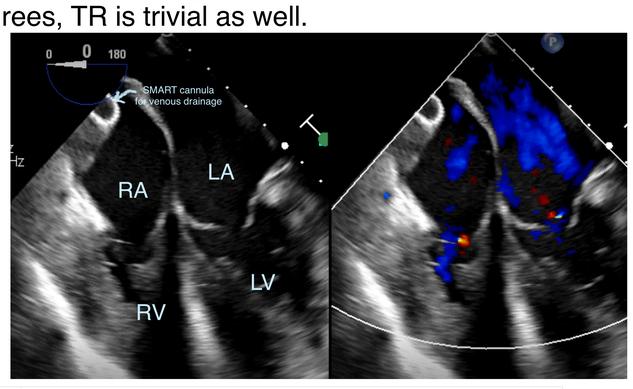


TEE at ME 125 degrees (middle) with colour doppler (right).

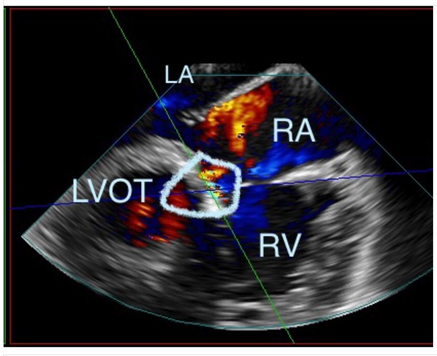
We noted there is an abnormal colour jet somewhere entering RA, as shown on the following left images. This can be TR, however, on ME 0 degrees, TR is trivial as well.



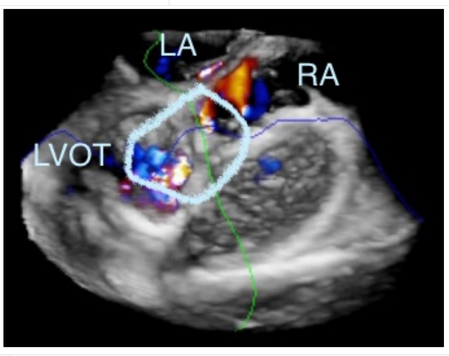
TEE at ME 140 degrees (left).



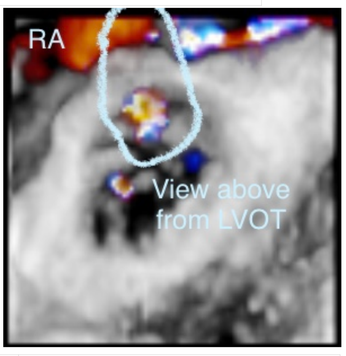
TEE at ME 0 degrees (right).



TEE with multiplanar reconstruction (left).



3D TEE with colour (middle).



3D TEE with colour (right).

It is difficult to ascertain the origin of the jet entering RA. 3D TEE images were obtained together with multi-planar reconstruction. It was confirmed that there is a fistula from the LVOT to RA. Identification of the origin and entry of the jet is significant as it may affect the cannulation and bypass strategies.

Intra-operatively, the fistula is difficult to be identified. A stitch was applied to close the fistula at the location based on the TEE findings. Post-bypass TEE after AVR and PVR showed the disappearance of jet.

Learning Point: TEE is a crucial intra-operative assessment tool in open heart surgeries. Techniques with 3D image acquisition with multi-planar reconstructions allow better understanding and visualization of the pathologies, especially in a setting of complex heart structures with a range of possible structural abnormalities. We are proud and honoured to use the 3D TEE with MPR to tease our the ratatouille in this case of post-Rastelli procedure.