Posters

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CONGENITAL MITRAL VALVE REGURGITATION, THE DILEMMA OF REPAIR VERSUS REPLACEMENT

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BACKGROUND

- Congenital mitral regurgitation (MR) is a rare condition and can be challenging to manage when presenting in the neonatal period.
- Medical management is preferred in order to delay surgical intervention after 1 year of life.
- When surgical intervention is indicated, mitral valve (MV) repair is preferred, however there are instances when replacement is indicated.

CASE

- Previously healthy, full term, 2-week-old male presented with poor weight gain, murmur and cardiomegaly on chest x-ray.
- Echocardiogram showed moderate to severe MR and supra-systemic pulmonary hypertension (PHN) (figure 1, 2).
- The MV leaflets were thickened and tethered with failure of central coaptation, and the annulus was mild to moderately dilated.
- PHN was classified as WHO I and II (due to persistent PHN of newborn and MR respectively).
- Inhaled nitric oxide, Enalapril and Furosemide were initiated.
- Cardiac catheterization revealed a PVRi of 8.9 WU x m2, which was disproportionate to his degree of MR.
- A CTA was non-specific for lung parenchymal disease.
- Sildenafil and Flolan were added to reverse his PHN prior to proceeding with MV repair.
- At 4 weeks of age, he underwent mitral valvuloplasty which was complicated by severe MR and left heart failure (figure 3, 4).
- At 11 weeks of age, he underwent successful MV replacement with 17 mm St Jude mechanical valve (figure 5).
- PHN medications were weaned, and he was discharged home.

DECISION MAKING

- This patient presented with severe left heart failure and PHN secondary to severe congenital MR.
- Medical management was unsuccessful which led to MV intervention.
- Although MV replacement can be challenging, it was ultimately necessary in this case given the severe residual regurgitation after repair.

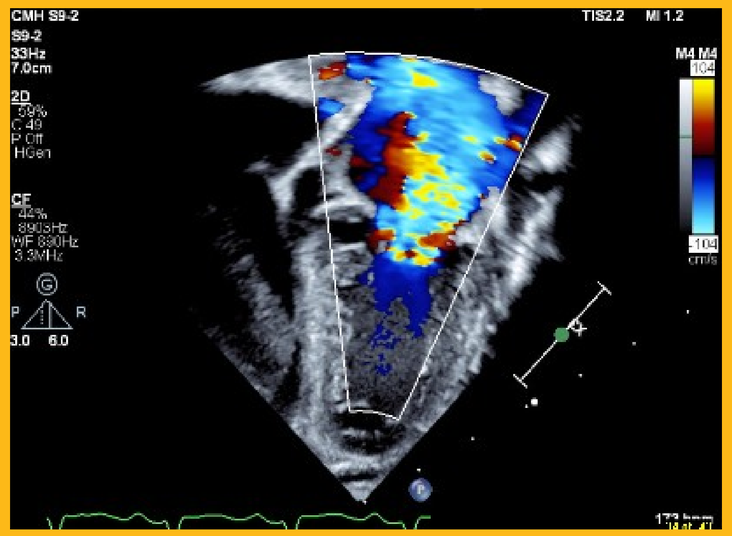

Figure 1: Apical image of severe congenital MR on presentation.

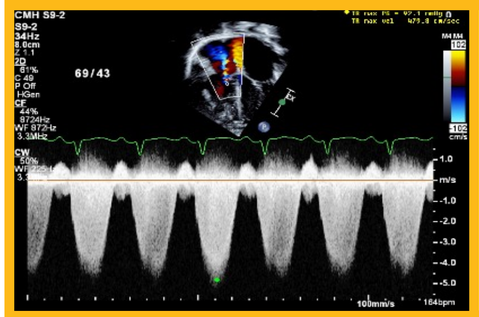

Figure 2: CW doppler of tricuspid regurgitation jet estimating supra-systemic PHN on presentation.

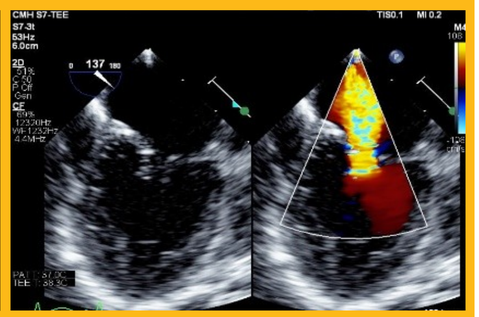

Figure 3: Post-operative TEE after MV repair showing persistent severe MR.

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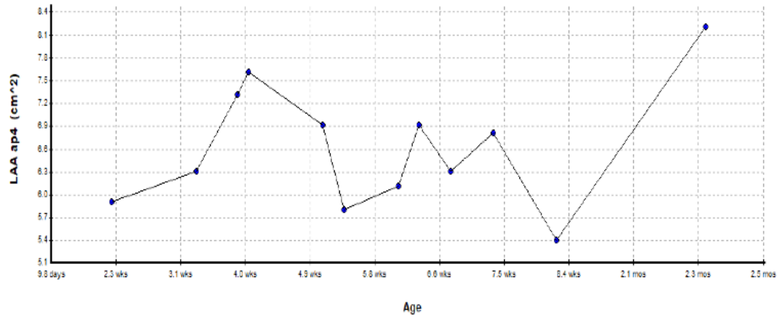

Figure 4: Graphic trends of left atrial volume prior to MV replacement.

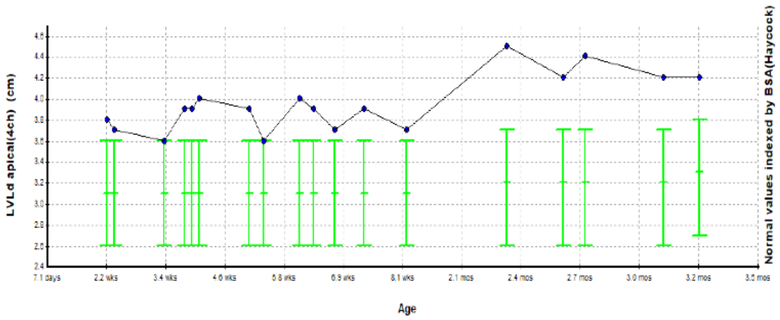

Figure 5: Graphic trends of left ventricular end diastolic volume; the last 3 data points were obtained after MV replacement.

CONCLUSION

- This case highlights the complexity of decision making for congenital MR, and the role of MV replacement in the case of failed repair.

DISCLOSURE INFORMATION

Neither authors have any disclosures to report.

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