ABSTRACT #6

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Title: Fontan-related morbidity and paced QRS duration: A case series
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Background: Permanent pacemakers (PPMs) have been associated with Fontan-related morbidity and mortality (FRM), especially in the setting of high ventricular pacing burdens. Longer QRS duration (QRSd) and prolongation of QRSd over time may be associated with poorer outcomes in ventricular-paced Fontan patients.

Methods: Fontan patients with ventricular pacing on serial ECGs who were seen in the Pediatric and Adult Congenital cardiology clinics at Yale New Haven Hospital were evaluated.

Results: Eleven patients were evaluated; seven (64\%) experienced FRM. Patients with FRM were 28 $\pm$ 13 years old at time of PPM implantation and had global QRSd 168 $\pm$ 30 ms after PPM placement and 198 $\pm$ 60 ms at the time of last follow-up. Patients without FRM were 8.8 $\pm$ 6 years old at time of PPM implantation and had global QRSd 139 $\pm$ 14 ms after PPM placement and 142 $\pm$ 20 ms at the time of last follow-up.

Conclusion: In this single-institution assessment of Fontan patients with ventricular pacing, paced QRSd increased over time in all ventricular-paced Fontan patients, with several patients having extremely long QRS durations at the end of the follow-up period. Those with FRM were generally older at the time of PPM implantation. QRS prolongation may be related to patient age and may be a potential therapeutic target for FRM management.

WORD COUNT: 216