Junctional ectopic tachycardia in a 6 month old undergoing repair of VSD and ASD

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Junctional ectopic tachycardia (JET) is defined as tachycardia with a normal QRS that is associated with atrioventricular dissociation. JET occurs in 10% of open-heart surgeries in children 1-16 years of age with limited treatment options resulting in mortality rates reported as high as 27%. A 6 month old with symptomatic pulmonary hypertension requiring supplemental oxygen underwent open heart surgery for a large VSD and ASD. The surgery was complicated by JET coupled with hemodynamic instability which did not respond to common antiarrhythmics and was not able to be paced. The heart rate was eventually stabilized with a Dexmedetomidine (Precedex) drip. Precedex is an a-2 adrenoreceptor agonist, thought to enhance vagal activity and modify catecholamine release allowing sympatholytic action with negative chronotropic effect. Currently, there is limited data on the use of precedex as a therapeutic option for JET and this case report shows the applicability of it in the clinical setting when all other options are exhausted.