

Oral presentation

## 9.2 QT interval dispersion in North Indian children with Kawasaki disease

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### Background

Increased QT interval dispersion is associated with an increased risk for ventricular arrhythmias and sudden cardiac events. We examined the association between increased QT interval dispersion and Kawasaki disease (KD) in children aged 4 1/2 to 12 years and compared the same with matched controls.

### Design and patients

The study population consisted of 20 children in convalescent phase of KD and 20 age and sex matched healthy controls. All children with KD had received intravenous immunoglobulin (IVIG) during the acute phase and only 1 had mild coronary artery involvement which had normalized during follow up. Intervals were measured with the use of a digital caliper (least count 0.01 mm) by a single blinded observer. QTc dispersion calculated was the difference between maximum and minimum corrected QT intervals in 12 and 8 leads (i.e. 6 precordial leads, shortest extremity lead, and median of 5 other extremity leads).

### Results

Of 480 leads obtained (12 per subject) 36 were excluded from analysis (15 because of poor T wave formation and 11 because of presence of U waves). Children with KD had significantly higher QTc dispersion in 12 lead ( $67.08 \pm 17.72$  msec compared to  $47.63 \pm 16.48$  msec in controls;  $p < 0.001$ ) as well as 8 lead ( $60.51 \pm 18.54$  msec compared to  $42.92 \pm 18.03$  msec in controls;  $p < 0.001$ ) analysis.

### Conclusion

QT interval dispersion appears to be significantly increased in children with KD. The dispersion is indicative of inhomogenous ventricular repolarization and may represent increased risk for developing ventricular arrhythmia in this population.