Anaesthesia For Children With Long QT Syndrome

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Long QT syndrome (LQTS) is an arrhythmogenic cardiovascular disorder resulting from mutation in cardiac ion channels leading to impaired ventricular repolarization and manifesting itself as a long QT interval on ECG. It predisposes to Torsade de pointes (malignant arrhythmia clinically manifested as syncope and sudden cardiac arrest). Beta-blockers, implantation of ICD and left cardiac sympathectomy denervation are used as lines of treatment of these patients.

Anaesthesia and surgery predispose to Torsade de pointes during the perioperative period as they may prolong QT interval. Therefore an understanding of LQTS pathophysiology and the associated risk factors contributing to Torsade de pointes is important for anaesthetists caring for children with LQTS. In addition, the anaesthetist should be aware of the recommendations of anaesthesia management of such group of patients.

No definite guide lines for anaesthesia management of LQTS, but there are certain recommendations provided by the literatures. They include preoperative adequate treatment with Beta-blockers, providing adequate premedication and calm preoperative environment with defibrillator always ready. Propofol, fentanyl, isoflurane and vecuronium are safe drugs to be used. Sympathetic stimulation should be avoided during laryngoscopy and intubation. There are few reports on regional anaesthesia in patients with LQTS. All authors avoided the use of epinephrine as adjuvant to the local anaesthetics. In the postoperative period the child should be monitored till recovery of anaesthesia in a calm warm environment with adequate pain control.