

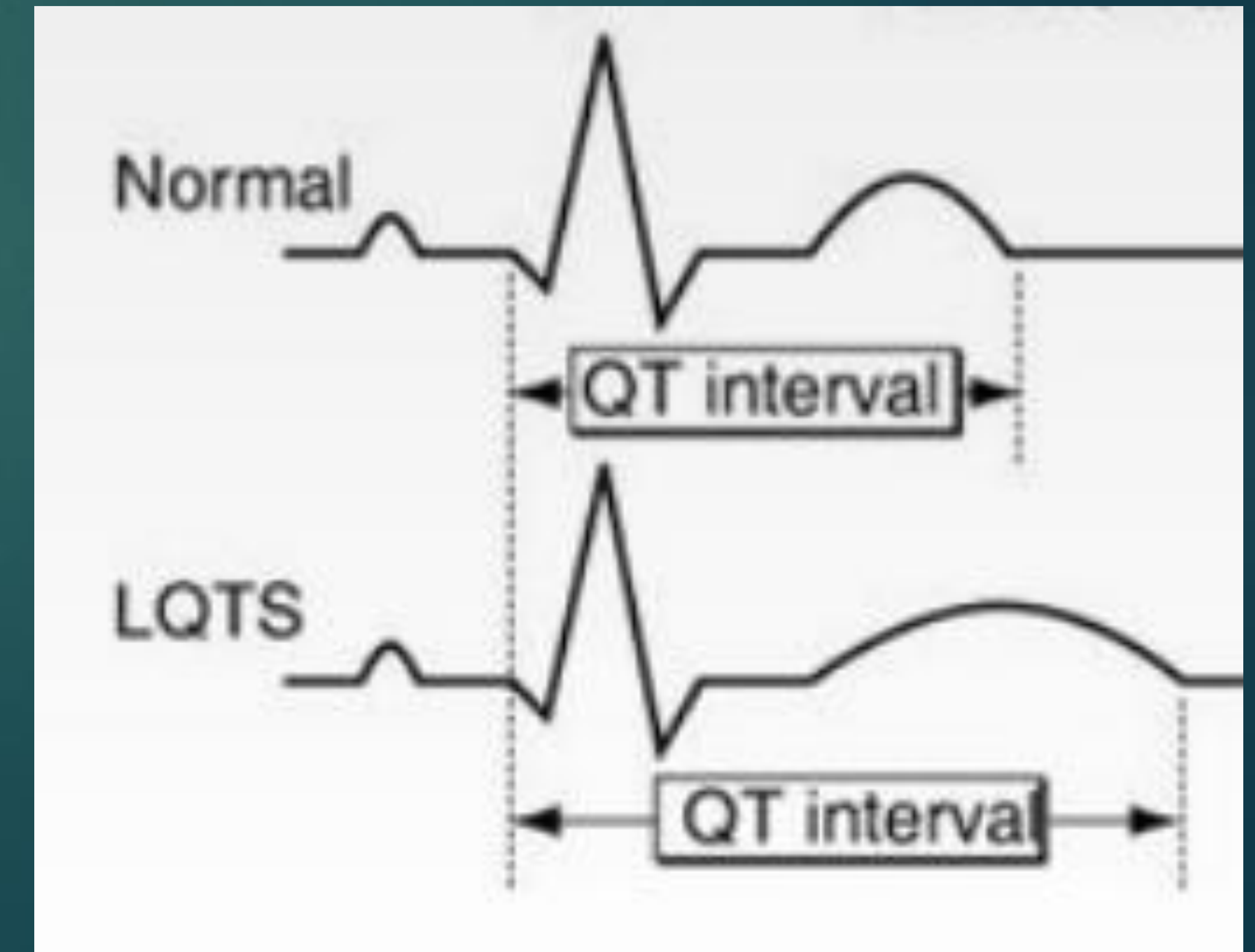
Anesthetic Management of Cesarean Delivery in a Parturient with Congenital Long QT Syndrome and an Implantable Cardioverter-Defibrillator

Nicolas Ferry MD & Jack Peace MD

Temple University Hospital

Background

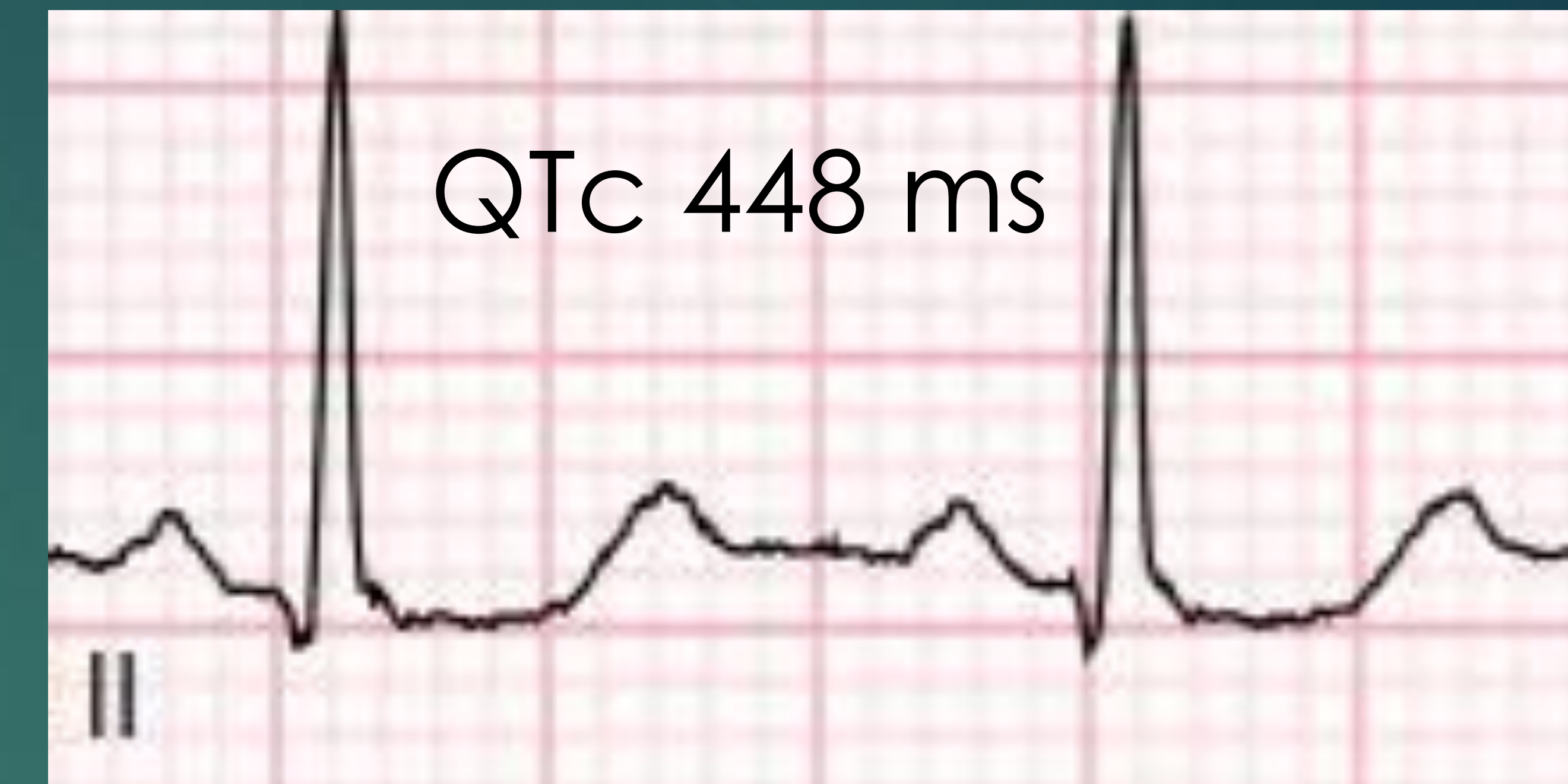
- ▶ Congenital long QT syndrome (LQTS) is a rare cardiac channelopathy
- ▶ Pregnancy and delivery increase arrhythmic risk
- ▶ Presence of an Implantable Cardioverter-Defibrillator (ICD) adds perioperative complexity
- ▶ Early anesthesia involvement enables proactive risk mitigation and multidisciplinary planning



Case

▶ Patient

- ▶ 42-year-old G3P1 with congenital Long QT Syndrome
- ▶ Prior ventricular fibrillation arrest → ICD
- ▶ Intermittent beta-blocker adherence; QTc 434-448 ms



▶ Perioperative Management

- ▶ Admission to telemetry with aggressive repletion
- ▶ Multidisciplinary care
- ▶ ICD interrogation

▶ Anesthetic Plan

- ▶ Cesarean delivery with CSE technique
- ▶ Avoided QT-prolonging medications
- ▶ Phenylephrine for hemodynamic support
- ▶ Preemptive, aggressive analgesia

▶ Outcome

- ▶ Uncomplicated cesarean delivery
- ▶ No perioperative arrhythmias

▶ Postpartum Course

- ▶ Environmental safeguards
- ▶ Abdominal pain → aggressive analgesia (improved by POD2)
- ▶ Continued electrolyte repletion
- ▶ POD2 headache → conservative management

Teaching Points

- ▶ Congenital Long QT Syndrome requires **strict** avoidance of QT-prolonging medications
- ▶ Electrolyte optimization is critical throughout the peri- **and postpartum** period
- ▶ Neuraxial anesthesia with avoidance of epinephrine to minimize sympathetic stimulation
- ▶ Phenylephrine preferred over ephedrine in LQTS patients
- ▶ Perioperative management of Implantable Cardioverter-Defibrillator (ICD) is essential
- ▶ Peri/Postoperative pain and physiologic stress increases arrhythmic risk → aggressive analgesia is key
- ▶ Multidisciplinary coordination = better outcomes in high-risk cardiac parturients
- ▶ **System-level safeguards (equipment readiness, visual reminders)** reduce risk of medication and response errors