LONG QT AFTER LIVE DONOR RENAL TRANSPLANT

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Case Presentation

• 44 yo female with HTN, a-fib (s/p cryoablation at age 27) and ESRD (2/2 SLE) scheduled for live donor renal transplant
• Preoperative evaluation, including cardiac treadmill stress test, unremarkable except Cr 6.32 mg/dL and pre-op ECG (borderline QTc 464 ms; HR 86 bpm)
• Tacrolimus started 7 days prior to surgery

Intraoperative Course and Meds

• Albumin
• Basiliximab
• Cefazolin
• Cisatracurium
• Dexamethasone
• Dopamine
• Ephedrine
• Fentanyl
• Furosemide
• Glycopyrrolate
• Hydromorphone
• Ketamine
• Lidocaine 2%
• Magnesia
• Metolazone
• Mycophenolate
• Neostigmine
• Ondansetron
• Phenylephrine
• Propofol
• Sevoflurane

Owczuk, R et al. (2012)
Post-operative Course – QT Interval

PACU QTc 514 ms
POD #1 QTc 489 ms
POD #2 QTc 451 ms

Discussion – QT Interval Correction

Bazett's QTcB = $\sqrt{RR}$
Overcorrects at high heart rates
Under corrects at low heart rates.

Fridericia's QTcF = $3\sqrt{RR}$

Discussion – Leaning Points

- Anticipate recovery of QT to correspond with half life of drugs
- Multiple medications known to prolong QT
- Hypocalcemia
- Communicate to surgical team for post-operative medication administration

Kies, SJ et al. (2005)