

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 | • Hydromorphone |
| • Basilixumab | • Ketamine |
| • Cefazolin | • Lidocaine 2% |
| • Cisatracurium | • Mannitol |
| • Dexamethasone | • Midazolam |
| • Dopamine | • Mycophenolate |
| • Ephedrine | • Neostigmine |
| • Fentanyl | • Ondansetron |
| • Furosemide | • Phenylephrine |
| • Glycopyrrolate | • 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 = $\frac{QT}{\sqrt{RR}}$

*Overcorrects at high heart rates
Under corrects at low heart rates.*

Fridericia's QTcF = $\frac{QT}{\sqrt[3]{RR}}$

Discussion – Learning 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)
