

# QT PROLONGATION

QT prolongation can cause a serious arrhythmia called torsades de pointes (TdP). Here are 3 steps for preventing TdP:

1

## assess the patient:



Ask about history. Previous TdP and congenital long QT are major risk factors for TdP.

Other risk factors include bradycardia, structural heart disease, electrolyte abnormalities, female gender, and older age



Ask about symptoms. Symptoms of TdP include heart palpitations and fainting.

If you're concerned, enquire about these symptoms at every refill

2

## assess the drug:



Check the treatment. Macrolides and quinolones can cause TdP in higher risk patients.

Safer options include beta lactams, cephalosporins and tetracyclins. Other drugs to watch are methadone, es/citalopram, ondansetron and antipsychotics. See [crediblemeds.org](http://crediblemeds.org) for a full list



Check the dose. The risk of TdP tends to increase as higher doses are used (e.g., domperidone  $\geq 30$  mg/day).

Make sure the patient doesn't have any factors that can cause a higher than expected serum concentrations, such as a drug-drug interaction or renal impairment



Check the ECG. An ECG is appropriate if the patient has multiple risk factors for TdP and is prescribed a drug that prolongs the QT interval.

Order an ECG at baseline and after 5 half-lives when the drug has reached steady state

3

## take action:



Make a decision. Patients are at higher risk for TdP if the drug prolongs their QTc interval to  $>450$  for males and  $>460$  for females, or if it prolongs their QT interval by  $>60$  msec.

If this happens, stop the drug if possible. If not, decrease the dose



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