Prolonged QT Syndrome

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EKG 101

- Electrocardiogram (EKG) measures the electrical activity of the heart over a period of time.

- Areas of measurement
  - PR Interval
  - QRS Interval
  - ST Segment
  - QT Interval
Prolonged QT Syndrome (LQTS)

• Classification
  – Congenital
  – Acquired
Acquired

- Most common cause of acquired LQTS is medications.

<table>
<thead>
<tr>
<th>Albuterol</th>
<th>Clindamycin</th>
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<tbody>
<tr>
<td>Amiodarone</td>
<td>Haldol</td>
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<tr>
<td>Avelox</td>
<td>Lasix</td>
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<tr>
<td>Bactrim</td>
<td>Methadone</td>
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<tr>
<td>Benadryl</td>
<td>Pepcid</td>
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<tr>
<td>Celexa</td>
<td>Zofran</td>
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Risk factors for LQTS

• Increased QT interval on EKG
• Females
• Advanced Age
• Hypokalemia
• Hypomagnesemia
• Bradycardia
• Increased plasma concentration of medications associated w/ LQTS
• Use of multiple prolonged QT inducing medications in short period of time
How does LQTS affect patient?

- Increased risk of syncope and sudden death from torsades de pointes/ polymorphic VT
Signs/ Symptoms

• EKG changes
• Tachycardia
• Hypotension
• Dizziness/ lightheaded
• Shortness of breath
• Chest pain
• Near syncope/ Syncope
• Seizure
• Sudden cardiac arrest
Treatment

- Serum potassium and magnesium level monitoring
- Cardiac monitoring
- Beta Blockers
- ICD