**QUINIDINE**

(kwin-i-deen)

**quinidine gluconate**

(kwin-i-deen-gloo-kon-ate)

**quinidine sulfate**

(kwin-i-deen-sul-fate)

**Quinaglute**

**Quinidex**

**Classification**

Therapeutic: antiarrhythmics (class IA)

**Pregnancy Category:** C

**Indications**

Restoration and maintenance of sinus rhythm in patients with atrial fibrillation or flutter. Prevention of recurrent ventricular arrhythmias. Treatment of malaria.

**Action**

Decrease myocardial excitability. Slow conduction velocity. Therapeutic Effects: Suppression of arrhythmias.

**Pharmacokinetics**

Absorption: Bioavailability of oral formulations is 70–80%. Extended-release preparations are absorbed slowly following oral administration.

Distribution: Widely distributed. Cross the placenta; enter breast milk.

Metabolism and Excretion: Metabolized by the liver; 5–20% excreted unchanged by the kidneys.

Half-life: 6–8 hours (q in HF or severe liver impairment).

**TIME/ACTION PROFILE (antiarrhythmic effects)**

<table>
<thead>
<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>PO (sulfate)</td>
<td>30 min</td>
<td>1–1.5 hr</td>
<td>6–8 hr</td>
</tr>
<tr>
<td>PO (sulfate-ER)</td>
<td>unknown</td>
<td>4 hr</td>
<td>8–12 hr</td>
</tr>
<tr>
<td>PO (gluconate)</td>
<td>unknown</td>
<td>1–3 hr</td>
<td>6–8 hr</td>
</tr>
<tr>
<td>IV</td>
<td>rapid</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Contraindications/Precautions**

Contraindicated in: Hypersensitivity; Conduction defects (in the absence of a pacemaker); Myasthenia gravis.

Use Cautionally in: HF (dose reduction recommended); Severe liver disease (dose reduction recommended); Hypokalemia or hypomagnesemia; Renal impairment; GI: Laparotomy, Pedi: Safety not established; extended-release preparations should not be used in children.

**Adverse Reactions/Side Effects**


**Interactions**

**Drug-Drug:** May ↑ risk of QT interval prolongation when used with tricyclic antidepressants, erythromycin, clarithromycin, haloperidol, sotalol, or fluoroquinolones. ↑ serum digoxin levels and may cause toxicity (dose reduction recommended). Phenytoin, phenobarbital, carbamazepine, or rifampin may ↓ metabolism and ↑ effects. Concomitant use of absolute contraindicated. Carbamazepine, phenytoin, rifampin, or tricyclic antidepressants may ↓ serum quinidine levels and risk of toxicity. Mexiletine, procainamide, haloperidol, methyldopa, or tricyclic antidepressants may ↑ serum quinidine levels and the risk of toxicity.

**Drug-Food:** Grapefruit juice may ↑ serum quinidine levels and effect (avoid concurrent use). Foods that alkalinize the urine may ↑ serum quinidine levels and the risk of toxicity.

**Contraindications:** Use with caution in patients with severe arrhythmias or systemic lupus.

**Genetic Implication:** CAPI TALS indicate life-threatening, underlines indicate most frequent. Strikethrough Discontinued.
Route/Dosage
Quinidine Gluconate (62% Quinidine)

PO (Adults): 524–972 mg q 8–12 hr.

IV (Adults): 200–400 mg q 4–6 hr; may be given at a rate not to exceed 10 mg/min until arrhythmia is suppressed, QRS complex widens, bradycardia or hypotension occurs.

Quinidine Sulfate (83% Quinidine)

PO (Adults): 200–400 mg q 4–6 hr; may be increased to 600–800 mg q 4–6 hr or 2 g/day until arrhythmia is suppressed.

PO (Children): 6 mg/kg 4–5 times daily.

Nursing Implications

Assessment
- Monitor ECG, pulse, and BP periodically during therapy.
- Lab Test Considerations: Monitor hepatic and renal function, CBC, and serum potassium and magnesium levels periodically during prolonged therapy.
- Toxicity and Overdose: Serum quinidine levels may be monitored periodically during dose adjustment. Therapeutic serum concentrations are 2–6 mcg/mL.
- Signs and symptoms of toxicity or cinchonism include tinnitus, hearing loss, visual disturbances, headache, nausea, and dizziness. These may occur after a single dose.
- Cardiac signs of toxicity include QRS widening, cardiac asystole, ventricular ectopy, bradycardia, and ventricular fibrillation.

Potential Nursing Diagnoses
- Decreased cardiac output (Indications)

Implementation
- Do not confuse quinidine with quinine.
- PO: Administer with a full glass of water on an empty stomach either 1 hr before or 2 hr after meals for faster absorption. If GI irritation becomes a problem, may be administered with or immediately after meals. Extended-release preparations should be swallowed whole; do not break, crush, or chew.

IV Administration
- pH: 5.5–7.6
- IV: Use a clear, colorless solution.
- Intravenous Infusion: Dilute: Dilute 400 mg of quinidine gluconate (10 mL) in 50 mL of D5W. Infusion is suitable for 24 hr at room temperature or 48 hr if refrigerated. Concentration: 8 mg/mL. Rate: Administer quinidine gluconate at a rate not to exceed 0.25 mg/kg/min. Administer via infusion pump to ensure accurate dose. Rapid administration may cause peripheral vascular collapse and severe hypotension.

Y-Site Compatibility: amikacin, atropine, bumetanide, calcium gluconate, captopril, cefazolin, cyclosporine, digoxin, dilatrop, diltiazem, dobutamine, dopamine, doxycycline, enalaprilat, epinephrine, erythromycin, famotidine, fentanyl, furosemide, gentamicin, granisetron, hydrocortisone, ibuprofen, imipenem, insulin, ivacaftor, labetalol, lidocaine, linezolid, lorazepam, metoprolol, midazolam, morphine, nafcilin, piperacillin, phlebitis, phenylephrine, phenytoin, potassium chloride, prochlorperazine, promethazine, propranolol, pantothenate, ranitidine, remifentanil, romifidine, succinylcholine, ticarcillin, tobramycin, vancomycin, vasopressin, verapamil, zosuferin.

Y-Site Incompatibility: acyclovir, amikacin, ampicillin, ampicillin/sulbactam, aztreonam, cefazolin, cefotaxime, cefoxitin, ceftriaxone, cefuroxime, chloramphenicol, clindamycin, daptomycin, dexamethasone, dobutamine, dopamine, doxycycline, enalaprilat, epinephrine, erythromycin, famotidine, fentanyl, fluconazole, gentamicin, granisetron, hydrocortisone, ibuprofen, imipenem, insulin, ivacaftor, labetalol, lidocaine, linezolid, lorazepam, metoprolol, midazolam, morphine, nafcilin, piperacillin, phlebitis, phenylephrine, phenytoin, potassium chloride, prochlorperazine, promethazine, propranolol, pantothenate, ranitidine, remifentanil, romifidine, succinylcholine, ticarcillin, tobramycin, vancomycin, vasopressin, verapamil, zosuferin.

Patient/Family Teaching
- Instruct patient to take medication around the clock, exactly as directed, even if feeling well. Take missed doses as soon as remembered if within 2 hr; if remembered later, omit. Do not double doses.
- Instruct patient or family member on how to take pulse. Advise patients to report changes in pulse rate or rhythm to health care professional.
- May cause dizziness or blurred vision. Caution patient to avoid driving or other activities requiring alertness until response to medication is known.
- Inform patient that quinidine may cause increased sensitivity to light. Dark glasses may minimize this effect.

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CONTINUED

QUINIDINE

- Advise patient to inform health care professional of medication regimen prior to treatment or surgery.
- Instruct patient to notify health care professional of all Rx or OTC medications, vitamins, or herbal products being taken and consult health care professional before taking any new medications.
- Advise patient to consult health care professional if symptoms of cinchonism, rash, or photosensitivity occur or if diarrhea is severe or persistent.
- Advise patient to carry identification at all times describing disease process and medication regimen.
- Emphasize the importance of routine follow-up exams to monitor progress.

Evaluation/Desired Outcomes

- Decrease or cessation of cardiac arrhythmia.
- Resolution of malarial infection.

Why was this drug prescribed for your patient?