

**TABLE 276-4 COMMONLY USED ANTIARRHYTHMIC AGENTS: CHRONIC ORAL DOSING/PRIMARY INDICATIONS**

Drug	Dosing Oral, mg, Maintenance	Half-Life, h	Primary Route(s) of Metabolism/Elimination	Most Common Indication	Class <sup>a</sup>
Acebutolol	200–400 q12h	6–7	Renal/hepatic	AF rate control/SVT Long QT/RVOT VT	II
Amiodarone	100–400 qd	40–55 d	Hepatic	AF/VT prevention	III <sup>b</sup>
Atenolol	25–100 per d	6–9	Renal	AF rate control/SVT Long QT/RVOT VT	II
Digoxin	0.125–0.25 qd	38–48	Renal	AF rate control	—
Diltiazem	30–60 q6h	3–4.5	Hepatic	AF rate control/SVT	IV
Disopyramide	100–300 q6–8h	4–10	Renal 50%/hepatic	AF/SVT prevention	Ia
Dofetilide	0.125–0.5 q12h	10	Renal	AF prevention	III
Dronedrone	400 q12h	13–19	Hepatic	AF prevention	IIIb
Flecainide	50–200 q12h	7–22	Hepatic 75%/renal	AF/SVT/VT prevention	Ic
Metoprolol	25–100 q6h	3–8	Hepatic	AF rate control/SVT Long QT/RVOT VT	II
Mexiletine	150–300 q8–12h	10–14	Hepatic	VT prevention	Ib
Nadolol	40–240 per d	10–24	Renal	Same as metoprolol	II
Propafenone	150–300 q8h	2–8	Hepatic	AF/SVT/VT prevention	Ic
Quinidine	300–600 q6h	6–8	Hepatic 75%/renal	AF/SVT/VT prevention	Ia
Sotalol	80–160 q12h	12	Renal	AF/VT prevention	III
Verapamil	80–120 q6–8h	4.5–12	Hepatic/renal	AF rate control/RVOT VT Idiopathic LV VT	IV

<sup>a</sup>Classification of antiarrhythmic drugs: class I—agents that primarily block inward sodium current; class II—antisymptomatic agents; class III—agents that primarily prolong action potential duration; class IV—calcium channel-blocking agents. <sup>b</sup>Amiodarone and dronedrone both are grouped in class III, but both also have class I, II, and IV properties.

**Abbreviations:** AF, atrial fibrillation; LV, left ventricular; RVOT, right ventricular outflow tract; SVT, supraventricular tachycardia; VT, ventricular tachycardia.

facilitate termination. Chronic therapy with these medications or flecainide is an option if prophylactic therapy is needed. Catheter ablation of the slow AV nodal pathway is recommended for patients with recurrent or severe episodes or when drug therapy is ineffective, not tolerated, or not desired by the patient. Catheter ablation is curative in over 95% of patients. The major risk is heart block requiring permanent pacemaker implantation, which occurs in less than 1% of patients.

**Junctional Tachycardia** Junctional ectopic tachycardia (JET) is due to automaticity within the AV node. It is rare in adults and more

frequently encountered as an incessant tachycardia in children, often in the perioperative period of surgery for congenital heart disease. It presents as a narrow QRS tachycardia, often with ventriculoatrial (VA) block, such that AV dissociation is present. JET can occur as a manifestation of increased adrenergic tone and may be seen after administration of isoproterenol. It may also occur for a short period of time after ablation for AVNRT.

*Accelerated junctional rhythm* is a junctional automatic rhythm between 50 and 100 beats/min. Initiation may occur with gradual acceleration in rate, suggesting an automatic focus, or after a premature

**TABLE 276-5 COMMON AND PROARRHYTHMIC TOXICITIES OF ANTIARRHYTHMIC AGENTS**

Drug	Potential Proarrhythmic Toxicities	Common Toxicities
Amiodarone	Sinus bradycardia, AV block, increase in defibrillation threshold. Rare: long QT and torsades des pointes, incessant slow VT in heart disease	Tremor, peripheral neuropathy, pulmonary fibrosis or inflammation, hypo- and hyperthyroidism, hepatitis, photosensitivity
Adenosine	Transient profound pauses, atrial fibrillation	Cough, flushing, chest pain, anxiety
Digoxin	AV block, fascicular tachycardia, accelerated junctional rhythm, atrial tachycardia with AV block	Anorexia, nausea, vomiting, visual changes
Disopyramide	Long QT and torsades des pointes, 1:1 ventricular response to atrial flutter	Anticholinergic effects, acute urinary retention (males), negative inotropy
Dofetilide	Long QT and torsades des pointes	Nausea
Dronedrone	Bradycardias and AV block, long QT and torsades des pointes (rare)	Gastrointestinal intolerance, exacerbation of heart failure
Flecainide	1:1 Ventricular response to atrial flutter; increased risk of ventricular tachycardias in patients with structural heart disease; sinus bradycardia	Dizziness, nausea, headache, decreased myocardial contractility
Ibutilide	Long QT and torsades des pointes	Nausea
Lidocaine	Slow VT in some patients with structural heart disease	Dizziness, confusion, delirium, seizures, coma
Mexiletine	Slow VT in patients with structural heart disease	Ataxia, tremor, gait disturbances, rash, nausea
Procainamide	Long QT and torsades des pointes, accelerated ventricular rate in AF or flutter	Lupus erythematosus–like syndrome (more common in slow acetylators), anorexia, nausea, neutropenia
Propafenone	1:1 Ventricular response to atrial flutter; increased risk ventricular tachycardias in patients with structural heart disease; sinus bradycardia	Taste disturbance, dyspepsia, nausea, vomiting
Quinidine	Long QT and torsades des pointes, accelerated ventricular rate in AF or flutter	Diarrhea, nausea, vomiting, cinchonism, thrombocytopenia
Sotalol	Long QT and torsades des pointes	Hypotension, bronchospasm from $\beta$ -blocking effect

**Abbreviations:** AF, atrial fibrillation; AV, atrioventricular; VT, ventricular tachycardia.