

Common Brand Names:

Bretylol® (Du Pont)

Bretylium Tosylate

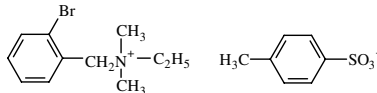
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Therapeutic Class:

An adrenergic blocking antiarrhythmic agent.

Injectable Dosage Forms Available:

- Injection: 50 mg/mL in vials, ampules, and syringes; and as 2 mg/mL and 4 mg/mL in 5% dextrose for IV infusion.



Dosage Ranges:

- For life-threatening arrhythmias 5 mg/kg may be given over 1 minute. If ventricular fibrillation continues, 10 mg/kg may be given and repeated at 15-30 minute intervals up to a total of 30 mg/kg.
- For other arrhythmias, the initial dose is 5-10 mg/kg IM or IV at intervals of 1-2 hours. Maintenance therapy consists of repeat doses every 6-8 hours IM or by intermittent IV every 6 hours. Alternatively, 1-2 mg/minute may be given by continuous infusion.
- Children have received 2-5 mg/kg IM as a single dose, although some recommendations say adult doses can be tolerated.
- Therapeutic Drug Level: Between 0.5 and 1.5 $\mu\text{g/mL}$

Administration and Stability:

May be given undiluted (50 mg/ml) IM or by direct IV injection over 1 minute. For intermittent or continuous IV infusion, 500 mg must be diluted to at least 50 ml with a compatible solution (D5W, NS) and given over a period of at least 8 minutes. Alternatively, a commercially prepared solution may be used for both intermittent or continuous infusion. Stable for 7 days at room temperature or refrigerated when diluted with NS or D5W.

Pharmacology/Pharmacokinetics:

Bretylum tosylate is a class III antiarrhythmic agent whose exact action has not been fully determined. It suppresses ventricular fibrillation by a direct action on myocardium, and suppression of ventricular tachycardia results from adrenergic blockade. Exhibits low serum protein binding (1-6%) and high tissue binding. Bretylum is not metabolized and is excreted unchanged in the urine. The elimination half-life ranges from 7-11 hours.

Drug and Lab Interactions:

When administered with lidocaine, quinidine, procainamide, or propranolol, cardiac effects may be additive or antagonistic, and toxic effects may be additive.

Contraindications/Precautions:

Use of commercially available solutions is contraindicated in patients with hypersensitivity to corn or corn products. Should be

used with caution in digitalized patients until glycoside toxicity is ruled out as the cause of the arrhythmia, and caution should also be exercised in patients with fixed cardiac output due to pulmonary hypertension or or aortic stenosis. Pregnancy Category C.

Adverse Effects:

Hypotension is the most frequently reported toxic effect, with nausea and vomiting also reported when given by too rapid IV administration. Other reports include precipitation of anginal attacks, increases in blood pressure, headache, ventricular tachycardia, sinus bradycardia, skin rash, and renal dysfunction.

Common Clinical Applications:

Useful in the treatment of ventricular fibrillation and resistant ventricular arrhythmias.

