

Approaches to Minimizing Adverse Effects during Long-Term Pharmacological Management of Paroxysmal Supraventricular Tachycardia: A Comparative Narrative Review

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ABSTRACT

To compare the effectiveness, toxicity, contraindications, and risk-mitigation strategies of oral drugs used to prevent recurrent paroxysmal supraventricular tachycardia (PSVT). Comparative narrative review with a structured and reproducible literature search. PubMed/MEDLINE, Google Scholar, and the Cochrane Library were searched on 22 August 2025 for English-language human studies published from 1970 through that date. Clinical studies of oral prophylaxis lasting at least one month were included when efficacy and safety were reported. Evidence was classified as direct PSVT evidence or indirect evidence from mixed supraventricular-arrhythmia populations. Randomized studies were appraised with RoB 2 and nonrandomized studies with ROBINS-I. The sole author extracted and rechecked all data against the original reports. Fifteen clinical reports were synthesized. Direct adult evidence was mostly small, old, and heterogeneous. Dofetilide 500 micrograms twice daily and propafenone 150 mg three times daily produced similar six-month freedom from symptomatic PSVT (50% and 54%), whereas azimilide evidence was inconsistent and included torsades de pointes. Other reviewed drugs reduced recurrences in selected populations, but cross-study safety ranking was invalid. Important risks included bradycardia or atrioventricular block, hypotension, QRS or QT prolongation, proarrhythmia, and amiodarone-related organ toxicity. Catheter ablation is generally preferred for recurrent symptomatic PSVT when feasible. Long-term drug therapy should be individualized by arrhythmia mechanism, structural heart disease, comorbidity, contraindications, monitoring burden, preference, and ablation access. No reviewed drug class has an established universally superior safety profile.

Keywords: *adverse effects; antiarrhythmic drugs; atrioventricular nodal re-entrant tachycardia; atrioventricular re-entrant tachycardia; catheter ablation; paroxysmal supraventricular tachycardia; prophylaxis*

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