

FIGURE 276-8 Preexcited atrial fibrillation (AF) due to conduction over a left free wall accessory pathway (AP). The electrocardiogram shows rapid irregular QRS complexes that represent fusion between conduction over the atrioventricular node and left free wall AP. Shortest R-R intervals between preexcited QRS complexes of less than 250 ms, as in this case, indicate a risk of sudden death with this arrhythmia.

with WPW syndrome may have wide-complex tachycardia due to antidromic AV reentry, orthodromic AV with bundle branch block, or a preexcited tachycardia, and treatment depends on the underlying rhythm.

Initial patient evaluation should include assessment for aggravating factors, including intercurrent illness and factors that increase sympathetic tone. Examination should focus on excluding underlying heart disease. An echocardiogram is reasonable to exclude Ebstein's anomaly and hypertrophic cardiomyopathy.

Patients with preexcitation who have symptoms of arrhythmia are at risk for developing atrial fibrillation and sudden death if they have an AP with high-risk properties. The risk of cardiac arrest is in the range of 2 per 1000 patients in adults but is likely greater in children. An invasive electrophysiology study is warranted to determine if the AP is high enough risk to warrant potentially curative catheter ablation. For patients with concealed APs or known low-risk APs causing orthodromic AV reentry, chronic therapy is guided by symptoms and frequency of events. Vagal maneuvers may terminate episodes, as may a dose of beta blocker, verapamil, or diltiazem taken at the onset of an episode. Chronic therapy with these agents or flecainide can reduce the frequency of episodes in some patients. Catheter ablation is warranted for recurrent arrhythmias when drugs are ineffective, not tolerated, or not desired by the patient or if the AP is considered high risk (Fig. 276-8). Efficacy is in the range of 95% depending on the location of the AP. Serious complications occur in fewer than 3% of patients, but can include AV block, cardiac tamponade, thromboemboli, coronary artery injury, and vascular access complications. Mortality occurs in less than 1 in 1000 patients.

Adults who have preexcitation but no arrhythmia symptoms have a risk of sudden death estimated to be 1 per 1000 patient-years. Electrophysiology study is usually advised for people in occupations for which an arrhythmia occurrence would place them or others at risk, such as police, military, and pilots, or for individuals who desire evaluation for risk. Routine follow-up without therapy is reasonable in others. Children are at greater risk of sudden death, approximately 2 per 1000 patient-years.

TREATMENT PAROXYSMAL SUPRAVENTRICULAR TACHYCARDIA

Acute management of narrow QRS PSVT is guided by the clinical presentation. Continuous ECG monitoring should be implemented and a 12-lead ECG should always be obtained when possible. In the presence of hypotension with unconsciousness or respiratory distress, QRS-synchronous direct current cardioversion is warranted, but this is rarely needed, because intravenous adenosine works promptly in most situations (see below). For stable individuals, initial therapy takes advantage of the fact that most PSVTs are dependent on AV nodal conduction (AV nodal reentry or orthodromic AV reentry) and therefore likely to respond to sympatholytic and vagotonic maneuvers and drugs (Fig. 276-9). As these are administered, the ECG should be continuously recorded, because the response can

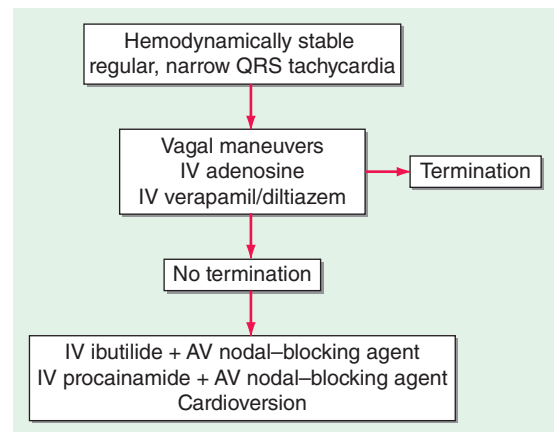


FIGURE 276-9 Treatment algorithm for patients presenting with hemodynamically stable paroxysmal supraventricular tachycardia. AV, atrioventricular.