

Catheter Ablation Procedure for Treatment of Arrhythmias

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Catheter ablation for treatment of arrhythmias is a procedure performed by cardiologists who are specialists in cardiac electrophysiology. For many patients who suffer from symptoms of tachycardia, this procedure may permanently eliminate the focus of tachycardia. The long-term success rate of the procedure for treatment of many of the common arrhythmias, such as narrow complex supraventricular tachycardia and right atrial flutter, is greater than 90%. Therefore, catheter ablation is indicated as the initial step for treatment of these arrhythmias to avoid long-term antiarrhythmic drug therapy, and to prevent recurrence of symptomatic arrhythmias. Catheter ablation is also indicated for the treatment of arrhythmias in patients with Wolf Parkinson White Syndrome, idiopathic ventricular tachycardia (normal heart), and ventricular tachycardia in patients with heart disease and atrial fibrillation. The long-term success rates in these arrhythmias are high, but vary depending on the anatomic location of the focus of the arrhythmia.

The procedure is performed in the electrophysiology laboratory located in the cardiac catheterization area of the hospital. It requires specialized equipment and a team of nurses and technicians specially trained to assist the physician in the procedure. The patient is sedated, and after local anesthesia, catheters are inserted via the right and femoral veins which record the electrical signals in the heart. The catheters are advanced into the heart under x-ray guidance. After the initial diagnostic testing, the tachycardia is initiated. Using the catheters in the heart, the focal origin of the arrhythmia is identified. The electrical tissue that is causing the arrhythmia is burned or ablated using a catheter designed for the application of energy. The length of the procedure varies depending on the type of arrhythmia being treated— on average between two to four hours. The risk of a serious complication is low, less than 1%, particularly if an experienced electrophysiologist performs the procedure.