



WOLFF-PARKINSON-WHITE (WPW) SYNDROME

Wolf-Parkinson-White Syndrome (WPW) is the most common group of electrocardiographic (EKG) abnormalities and arrhythmias known as the “pre-excitation syndromes.” Named for the three physician scientists who first describe the disorder, WPW occurs in persons who have an extra electrical connection between the top and bottom chambers of the heart (the atria and ventricles, respectively). This occurs during the embryological development of the heart in about 0.1% of the population. If the normal separation of the atria and ventricles is incomplete, it leaves a small band of electrically active tissue in an accessory location. This “accessory pathway” may be capable of rapid transmission of electrical impulses, causing rapid heart arrhythmias or “tachycardia”. Although some people with WPW never have tachycardia and are completely asymptomatic, others may have arrhythmias that cause palpitations, dizziness, fainting spells, or rarely, cardiac arrest.

People with WPW can have symptoms at any age, but 80% of patients have onset of symptoms between the ages of 11 and 50 years. Although WPW is not inherited in a strict familial fashion, there is a fourfold increase in the incidence of WPW among family members of patients with WPW syndrome. In these families, this pattern probably represents a type of dominant inheritance referred to as “incomplete penetrance.” In most WPW patients however, no pattern of inheritance can be determined. Interestingly, there is an increased incidence of WPW in patients with other types of heart disease that may be inherited, such as mitral valve prolapse and hypertrophic cardiomyopathy.

WPW is usually diagnosed by a routine EKG, either incidentally or after a patient has symptoms. Significant numbers of patients have an accessory pathway that is “concealed,” i.e. not visible on a routine EKG. The presence of such a pathway can be inferred by recording EKG strips of tachycardia, but can only be confirmed by special testing of the heart’s electrical system known as “electrophysiology study.”

Rapid advances in the treatment of symptomatic WPW have been made in the last ten years. Asymptomatic patients are at low risk for dangerous arrhythmias and generally do not require treatment, unless required for high-risk professionals such as airline pilots or firefighters. Patients with symptoms can be treated with medications or by “catheter ablation,” a non-surgical procedure in which the accessory pathway is localized and ablated (destroyed) by radio wave energy delivered by a small flexible catheter (wire), introduced via a vein or artery in the groin. Successful catheter ablation eliminates the need for drug therapy and essentially provides a cure. The decision to treat with drugs or catheter ablation is determined by the severity of symptoms, level of risk for future arrhythmias, and patient preference.

For more information please contact the C.A.R.E. Foundation at (800) 404-9500 or care@longqt.org