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Procainamide Hydrochloride

National Cancer Institute

Source

National Cancer Institute. *Procainamide Hydrochloride*. NCI Thesaurus. Code C47687.

The hydrochloride salt form of procainamide, an amide derivative exhibiting class 1A antiarrhythmic property and analog of procaine. Procainamide hydrochloride reversibly binds to and blocks activated (open) voltage-gated sodium channels, thereby blocks the influx of sodium ions into the cell, which leads to an increase in threshold for excitation and inhibit depolarization during phase 0 of the action potential. In addition, the effective refractory period (ERP), action potential duration (APD), and ERP/APD ratios are increased, resulting in decreased impulse conduction velocity. The lasting action potential may also be due to blockage of outward K⁺ currents. The result is a decrease in automaticity, increase in refractory period and slowing of impulse conduction.