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Quinidine Sulfate

National Cancer Institute

Source

National Cancer Institute. *Quinidine Sulfate*. NCI Thesaurus. Code C48014.

The sulfate salt form of quinidine, an alkaloid with antimalarial and antiarrhythmic (Class Ia) properties. Quinidine sulfate exerts its anti-malarial activity by acting primarily as an intra-erythrocytic schizonticide through association with the hemepolymer (hemozoin) in the acidic food vacuole of the parasite thereby preventing further polymerization by heme polymerase enzyme. This results in accumulation of toxic heme and death of the parasite. Quinidine sulfate exerts its antiarrhythmic effects by depressing the flow of sodium ions into cells during phase 0 of the cardiac action potential, thereby slowing the impulse conduction through the atrioventricular (AV) node, reducing the rate of phase 0 depolarization and prolonging the refractory period. Quinidine sulfate also reduces the slope of phase 4 depolarization in Purkinje-fibres resulting in slowed conduction and reduced automaticity in the heart.