

How to avoid side effects of acetazolamide

Part of Chapter 46: Nondystrophic myotonias and periodic paralyses.

In: *Myology*, edited by AG Engel, C Franzini-Armstrong.

McGraw-Hill, New York, 3rd edition, 2004, pp. 1257-1300

Lehmann-Horn F, Rüdell R, Jurkat-Rott K.

“The prophylactic medications of choice in HypoPP type 1 are carbonic anhydrase inhibitors, such as acetazolamide or dichlorophenamide (for their effects see also “Therapy of hyperkalemic periodic paralysis”). The preventive effect of these medications was established by controlled studies (Griggs et al., 1970; Tawil et al., 2000). The dosage should be as low as possible, e.g., from 125 mg acetazolamide every other day to a maximum of 500 mg twice daily, or 25-75 mg dichlorophenamide per day. The frequent side effect of dysgeusia can be avoided by ingestion of carbogen-free water, and the potential hypokalemia compensated by potassium substitution. Adverse reactions to the drug include paresthesia, confusion, anorexia, transient myopia, and an increased incidence of nephrolithiasis. The latter is the result of hyperoxaluria and reduced urinary citrate excretion. Kidney stone development can be inhibited by oral administration of citric acid and citrates which inhibit spontaneous nucleation of calcium salts and crystal growth, and by hydration, a measure that also prevents paralytic attacks. The optimal dose of the kidney stone inhibitors can be identified by determining electrolyte concentration in the urine collected in 24h. If prevention remains unsuccessful, extracorporeal shock wave lithotripsy, a non-invasive method nowadays widely established, may replace surgical treatment. Only few patients have developed renal failure during protracted carbonic anhydrase inhibitor therapy. Particularly patients with a chronic progressive myopathy should be treated as long as muscle is conserved even though the effect of the drugs on the course of the disease is unknown.“