Acetazolamide

Acetazolamide, usually sold under the trade name Diamox in some countries, is a carbonic anhydrase inhibitor that is used for the medical treatment of glaucoma, epileptic seizure, idiopathic intracranial hypertension, altitude sickness, cystinuria, periodic paralysis, central sleep apnea, and dural ectasia. Acetazolamide is a diuretic, and it is available as a generic drug in the United States. Diamox is now available as Diamox Sequels in the United States since the original product is no longer made or sold there.

Dose

Usual Adult Dose for Edema 250 to 375 mg oral or IV once a day.

When continued acetazolamide therapy for edema is desired, it is recommended that every second or third dose be skipped to allow the kidney to recover.

Usual Adult Dose for Acute Mountain Sickness Oral tablet: 125 to 250 mg orally every 6 to 12 hours. - or- SR capsule: 500 mg orally every 12 to 24 hours.

The maximum recommended dose is 1 gram/day. For rapid ascent, higher doses are beneficial for preventing acute mountain sickness beginning 24 to 48 hours before ascent and continuing for 48 hours while at high altitude.

Usual Adult Dose for Glaucoma Open-angle Glaucoma:

tablet or IV injection: 250 mg 1 to 4 times a day. - or- SR capsule: 500 mg once or twice a day.

Closed-angle glaucoma:

250 to 500 mg IV, may repeat in 2 to 4 hours to a maximum of I gram/day.

Usual Adult Dose for Seizure Prophylaxis 8 to 30 mg/kg/day in 1 to 4 divided doses. Do not exceed 1 gram per day.

If this patient is already taking other anticonvulsants, the recommended starting dosage is 250 mg once a day. If acetazolamide is used alone, most patients with good renal function respond to daily doses ranging from 375 to 1000 mg. The optimum dosage for this patient with renal dysfunction is not known, and will depend on this patient's clinical response and tolerance.

Acetazolamide is primarily used for the treatment of refractory epilepsy in combination with other drugs. Although it may be useful in partial, myoclonic, absence, and primary generalized tonic-clonic seizures uncontrolled by other marketed agents, it has been inadequately studied by current standards for these conditions.

Usual Pediatric Dose for Glaucoma

= 1 year:

Oral: 8 to 30 mg/kg/day or 300 to 900 mg/mÂ²/day divided every 8 hours. -or- IV: 20 to 40 mg/kg/day divided every 6 hours.

Maximum dose: 1 gram/day.

Side effects

Side effects include:

Paresthesias, hearing dysfunction or tinnitus, anorexia, altered taste, nausea, vomiting, diarrhea, polyuria, drowsiness, confusion.

Acetazolamide did not influence the resolution of traumatic CSF rhinorrhea and instead lead to significant metabolic and electrolyte disturbances ¹⁾.

Results suggest decreasing cerebrospinal fluid (CSF) production by acetazolamide attenuated thrombin-induced hydrocephalus in rats²⁾.

Epilepsy

Effective for focal, tonic clonic and absence seizures. Also used for menstrual-related seizures, certain episodic disorders and to enhance other AEDs.

Absence Seizure

Traumatic cerebrospinal fluid rhinorrhea

As acetazolamide decreases CSF production and hence CSF pressure, it has been proposed that the medication may help in curing CSF rhinorrhea. There is no definitive evidence, however, that acetazolamide is actually beneficial in treating traumatic CSF rhinorrhea. The aim of this study was to determine if the administration of acetazolamide in patients of head trauma with CSF rhinorrhea was beneficial in decreasing the duration of CSF rhinorrhea. The acid-base and electrolyte changes caused by the drug were also studied.

We conducted a single center randomized prospective study. Forty-four patients of head trauma with CSF rhinorrhea were divided into two groups, the experimental group (21 patients) was given acetazolamide; and, the control group (23 patients) did not receive the medication. The median duration of Cerebrospinal fluid fistula in days, and the electrolyte changes observed on administration of the medication were recorded in both the groups.

Both the experimental and control groups were well matched in terms of age, sex, mechanism of injury, Glasgow Coma Scale (GCS) and the type of skull fracture. The median duration of Cerebrospinal fluid fistula in the control group was of 4 days and in the study group, of 5 days. Acetazolamide caused significant metabolic acidosis and hypokalemia (as shown by decreased serum pH, serum bicarbonate and serum potassium levels) in the experimental group when compared to the control group.

Acetazolamide did not influence the resolution of traumatic CSF rhinorrhea and instead lead to significant metabolic and electrolyte disturbances ³⁾.

1) 3)

Gosal JS, Gurmey T, Kursa GK, Salunke P, Gupta SK. Is acetazolamide really useful in the management of traumatic cerebrospinal fluid rhinorrhea? Neurol India. 2015 Mar-Apr;63(2):197-201. doi: 10.4103/0028-3886.156280. PubMed PMID: 25947983.

2)

Gao F, Zheng M, Hua Y, Keep RF, Xi G. Acetazolamide Attenuates Thrombin-Induced Hydrocephalus. Acta Neurochir Suppl. 2016;121:373-7. doi: 10.1007/978-3-319-18497-5_64. PubMed PMID: 26463977.

From: https://neurosurgerywiki.com/wiki/ - **Neurosurgery Wiki**

Permanent link: https://neurosurgerywiki.com/wiki/doku.php?id=acetazolamide



Last update: 2024/06/07 02:55