using a ciguatoxin-specific enzyme immunoassay, but these techniques are generally not available in most health care institutions. The differential diagnosis of ciguatera includes paralytic shellfish poisoning, eosinophilic meningitis, type E botulism, organophosphate insecticide poisoning, tetrodotoxin poisoning, and psychogenic hyperventilation.

TREATMENT

Ciguatera Poisoning

Therapy is supportive and based on symptoms. Volume losses from vomiting and diarrhea should be treated with crystalloids and electrolyte repletion. Hypotension may rarely be unresponsive to fluids and require vasopressors. Symptomatic bradyarrhythmias generally respond well to atropine (0.5 mg IV, up to 2 mg). Problematic orthostasis can be treated with direct alpha-adrenergic agonists (e.g., phenylephrine). IV infusion of mannitol may be beneficial in moderate or severe cases in fluid-replete patients; however, the efficacy of this therapy has not been definitively proven. An initial IV dose of mannitol at 1 g/kg may be given over 45–60 min. If symptoms are alleviated, a second dose may be given within 3–4 h and a third dose the next day. Care must be taken to avoid dehydration. The mechanism of the drug's benefit against ciguatera poisoning is unclear but may be due to decreased sodium conductance across neuronal cell membranes. Hyperosmotic water-drawing action is another proposed mechanism but no changes in neuronal cell edema have been observed in vitro. Amitriptyline (25 mg orally twice a day) reportedly alleviates pruritus and dysesthesias and may decrease rates of subsequent development of chronic nerve symptoms. Gabapentin and pregabalin have shown some efficacy in the treatment of long-term nerve pain in case reports, but evidence from controlled trials is lacking.

During recovery from ciguatera poisoning, the victim should exclude the following from the diet for 6 months: fish (fresh or preserved), fish sauces, shellfish, shellfish sauces, alcoholic beverages, nuts, and nut oils. Consumption of fish in ciguatera-endemic regions should be avoided.