Device for controlled hypothermia on Fuzzy logic algorithms

Victor Cojocaru

Institute of Electronic Engineering and Nanotechnologies, Chisinau, MD2028, Moldoova

We propose a sample of a device for therapeutics with hypothermia used in medical purposes for directed cooling of specific tissues using Peltier, elements. Peltier cooling elements allow elaboration of a small mobile device that can be operated in emergency medical service, in this way reducing the risk of ischemic tissue trauma after heart failure or blockage of arteries to embolism.

Studies have shown that patients under risk for ischemic brain injury present better results using hypothermic methods of treatment. This studies where focused on researching ischemic accidents that unlike usual strokes reduces coagulation threshold. This researches shown that hypothermia used in therapeutical purposes has a neuroprotective effect. Studies showed as well that use of therapeutic hypothermia in order to control intracranial pressure (ICP) after an ischemic stroke is a safe and feasible procedure.

To conduct this system Fuzzy logic algorithms are used.These algorithms are fundamentally different from conventional methods of automation by ”human” approaching „human” techniques for control and management problems.

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