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Steroids in spinal shock/neurogenic shock post spinal trauma

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Neurogenic shock is the only shock which will present with bradycardia and associated with that hypotension. Old concept why steroid was used: Steroids in neurogenic shock (spinal) are believed to function by inhibition of free radical induced lipid peroxidation. Other benefits of steroids thought were improve spinal blood flow, increase extracellular calcium and prevent loss of potassium from injured cord tissue. Preference for methylprednisolone as it has better penetration into cells. NASCIS –I Multi center, double blind study in 1984 comparing high dose methylprednisolone (100 mg bolus and 25mg 6 hourly for 10 days vs 1000 mg bolus and 250 mg 6 hourly for 10 days) to standard dose Result: No significant difference in neurological recovery of motor response, pinprick sensation or touch 1 yr. after injury. NASCIS II-Comparison between methylprednisolone, naloxone and placebo in 1990 Results: it was also negative. In patients with acute spinal cord injury, methylprednisolone (30 mg/kg loading, then infusion of 5.4 mg/kg for 23 hours) shows modest improvements in

neurologic recovery when started in the first 8 hours of injury. NASCIS III-Comparison between methylprednisolone high dose for 24 hours, high dose for 48 hours and use of tirilazad (potent lipid peroxidation inhibitor) in 1997, Results: it was also negative trial. Patients receiving high dose (30mg/kg) MP for 48 hrs with regimen starting 3-8 hours after injury showed motor improvement. But these patients were most likely to develop complications. Realization that something is wrong and something new to be done: A recent Cochrane systematic review (written by the lead author of the NASCIS trials) essentially confirmed the conclusions of NASCIS II and III that high-dose methylprednisolone was beneficial when administered within 8 hours of injury, but these patients were also more likely to develop complications. The systematic review also recommended that more randomized trials be done urgently. Complication with use of high dose steroid. Most important, the U.S. Food and Drug Administration have not approved corticosteroids for acute spinal cord injury.

Biography

Farhat Anjum completed mbbs from bangladesh in 2010 and she was working in medanta medicity gurgaon india and then in hindu roa hospital delhi as senior resident. Presently final year resident in masters in emergency medicine institute of emergency medicine peerless hospital and b.k roy research center kolkata india in collaboration with george washington university usa. 3 publications in national and international journals.

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