

IS MANNITOL USEFUL IN INTRACEREBRAL HEMORRHAGE?

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Background: Mannitol is used and recommended in stroke by most physicians and academic bodies without any evidence. Our studies on low dose mannitol (0.5 mg/kg) for 1 week in ICH did not reduce 1 month mortality nor it significantly lead to blood flow changes as evaluate by SPECT Objective: Due to existing controversy about use of mannitol in intracerebral hemorrhage (ICH) this open exploratory trial with blinded outcome assessment of single mannitol bolus in ICH was undertaken. Design: CT proven primary supratentorial ICH patients having midline shift of > 3mm were randomized into 20% mannitol (1.5g/kg) and control groups. Clinical evaluation included Glasgow coma scale (GCS) score, Canadian Neurological scale (CNS) score, pupils, breathing, extensor posturing and contra-lateral pyramidal signs. On cranial MRI horizontal (HS) and superior sagittal sinus to pontomesencephalic junction (SSS-PMJ) distance were measured. Results: Twelve patients each were in mannitol and control groups. The age, sex, GCS score, CNS score, pupillary asymmetry, contra-lateral pyramidal signs, and SSS-PMJ distance in mannitol and control groups did not differ significantly. Mannitol infusion resulted clinical improvement in 5 patients, which lasted for 30-60min. HS and SSS-PMJ distance in mannitol and control groups did not change at 30 or 60min from the baseline. The change in HS and SSS-PMJ distance were also not significantly different between the two groups both at 30 and 60min. Conclusion: Mannitol led to transient clinical improvement in 5 patients without significant reduction in HS, SSS-PMJ distance or EHC at 30 and 60min.