

Effects of Flat On Bed versus Trendelenburg Position on Cerebral Blood Flow in Acute Ischemic Stroke

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Background: The cerebral blood flow in and around an infarcted area are compromised following occlusion or reduced perfusion. Subsequently the autoregulation in the area is likewise affected and blood flow is passively dependent on systemic blood pressure. It has been shown in previous studies that head position can influence cerebral flow. We would like to know if Trendelenburg position can augment cerebral blood and if it will influence the outcome.

Methods: Patients with acute infarction presenting within 24 hours with NIHSS 8-15 will be recruited for the study. Transcranial Doppler (TCD) will be done while the patient is lying down with 30-degree head-up position and flat on bed (0-degree). On both head positions, both legs will be elevated for 5 minutes and TCD will be repeated. Outcome measures are as follows: increased in the mean flow velocity, changes in the pulsatility index and outcome as measured by modified Rankin Scale at 3 months. This is an ongoing trial and has been approved by the Institutional review board.