

Abstract

Introduction: Subarachnoid hemorrhage (SAH) is defined as bleeding into the subarachnoid space between the arachnoid membrane and the pia matter surrounding the brain. Cerebral vasospasm remains the most significant and most common (40% to 97%) complication following subarachnoid hemorrhage.

Transcranial doppler is one of the emerging techniques, but despite the large body of evidence testifying to the application of transcranial doppler for monitoring patients with subarachnoid hemorrhage, for early prediction of vasospasm before development of ischaemic neurological deficit, the true value of this technique as a sensitive predictor alone for diagnosing clinical vasospasm is still a matter of debate. Aim of work, we aimed at evaluation of the role of TCD in monitoring patients with SAH.

Methods: Our study was carried out on 30 patients diagnosed to have acute subarachnoid hemorrhage presented within 48 hours (confirmed by CT brain) & Our patients were divided into two groups: ***Group A:*** Includes 15 patients that were monitored by both the usual standard clinical and neurological evaluation that is normally used in the treatment of SAH. ***Group B:*** Includes 15 patients that were subjected to continuous non-invasive Transcranial Doppler (TCD) monitoring from days (4-21) after SAH, it will be done on alternative days. ***Results:*** 30% of patients developed DIND maximum before day 10 prevalence of female (63.3%) to male (36.7%), and HTN (73.3%) to DM (13.3%) as pre-morbid condition, TCD is a useful technique to predict clinical vasospasm, when peak systolic velocity in MCA (>172 cm/sec), with (sensitivity >60% & specificity 88%). We found also, no increase in incidence of occurrence of DIND with increase in H&H classes which means more deterioration in neurological condition (55% of patients with DIND were HESS & HUNT grade 1 and 45% were grade (2) so, H&H evaluation could not predict clinical vasospasm alone before occurrence.

Conclusion: TCD is a useful tool for early prediction of DIND in SAH patients.

Key words; DIND : delayed ischaemic neurological deficits & TCD: transcranial Doppler & SAH: subarachnoid haemorrhage & pts: patients, H&H :Hess & Hunt.