# Trans Cranial Duplex as Marker for Cerebrovascular Complications in Type 2 DM

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**Abstract**

Type 2 diabetes mellitus (T2DM) is a multisystem disease, chronic exposure to hyperglycaemia affects the microvasculature and macrovasculature as well.
In the brain, T2DM is associated with white matter hyperintensities often presumed to be of vascular origin.

Transcranial Doppler (TCD) is a modern and sophisticated diagnostic procedure that enables recording the changes in cerebral perfusion in various states.

Visfatin is a newly cytokine that is discovered to have a direct relationship to (T2DM). This observational study point was to examine the cerebral changes occurring in type 2 diabetic patients and its relation to Visfatin level and macro-and microvascular complications in those patients.

This study presumed that the presence of significant difference in pulsatile index (PI) of right (RT), left (LT) middle cerebral (MC) and Basilar arteries between the studied groups, Visfatin level was higher among diabetic patients with Macro and Micro-vascular complications than those with no complications. In view of these discoveries, this study proposes that TCD can be used in detecting large vessel stenosis reflected by Mean Flow Velocity (MFV) and also arteriolar and white matter affection reflected by (PI).

**Keywords**

Type 2 diabetes mellitus, Transcranial Doppler, Visfatin, Microvascular complications, Macro-vascular complications.