Transcranial Doppler Diagnostic Values

Artery	Mean Velocity (cm/Sec)	Vasospasm velocities	Transducer position	Depth (mm)	Direction of flow	Response to carotid compression
MCA (M1)	65	> 120	Trans-temporal	30-60	Towards	Diminish
ACA/MCA			Trans-temporal	55-65	Bidirectional	
ACA (A1)	50	> 110	Trans-temporal	60-80	Away	Diminish
PCA (P1)	40	> 80	Trans-temporal	60-70	Towards	No change
PCA (P2)			Trans-temporal	60-70	Away	No change
EICA	37		Submandibular	35-70	Away	
TICA	60	> 120	Trans-temporal	55-65	Towards	Obliteration
Ophthalmic	20	> 50	Trans-orbital	40-60	Towards	Obliteration
Carotid Siphon	55	> 110	Trans-orbital	55-70	Away/Towards	Obliteration
Vertebral	40	> 80	Sub-occipital	60-90	Away	
Basilar	40	> 90	Sub-occipital	80-120	Away	

Degree of MCA Vasospasm

Degree of vasospasm	Mean Velocity	MCA/ICA ratio	Velocity : Angio stenosis
Normal	30-50		
Mild	120:140	< 3	120 = 25% stenosis
Moderate	140-200	3 : 6	160 = 25-50% stenosis
Severe	> 200	> 6	> 200 = > 50% stenosis

Degree of Basialr Vasospasm

Degree of vasospasm	Mean Velocity	Velocity : Angio stenosis
Moderate	90 : 120	25:50% stenosis
Severe	>120	> 50% stenosis

Lindegaard ratio:

- *What's it?* It is the ratio between MCA and ICA velocities
- *Why do we care about it?* Because in old days of triple H therapy, hypervolemia caused velocities to increase in all vessels. So the ration was used to differentiate if the increased velocity is due to vasospasm or hypervolemia.