ASPECT score and Transcranial Doppler flow parameters in middle cerebral artery in acute brain ischaemia.

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Transcranial Doppler (TCD,TCCD) flow parameters assessed with Thrombolysis in Brain Ischaemia (TIBI) (Fig. 1) score may reflect early brain hypoperfusion. Alberta Stroke Programme early CT Score (ASPECT) [3,4] may also reveal acute brain ischaemia. However, little is known about the relationship between the above parameters. Thus, our goal was to assess the relationship between TCD/TCCD flow parameters in middle cerebral artery (MCA) and ASPECT score in patients with stroke in MCA territory.

Materials and methods: 80 patients with acute MCA ischemia (66 with stroke, mean age 68 yrs and 14 with TIA mean age 68 yrs) were examined (Tab.1).

Figure 2. A NCCT B EASPECT 10 pts C TCD TIBI score -5

Figure 3. A NCCT B EASPECT 8 pts C TCD TIBI score -3

Figure 4. A NCCT B EASPECT 5 pts C TCD TIBI -1

Figure 1. TIBI classification [by Alexandrov and al.]

Figure 5. Correlation between ASPECT and the TIBI scores on stroke onset (all patients).

Figure 7. Correlation between follow up ASPECT and the TIBI scores on stroke onset.

	onset	7day
NIHSS[pts]	6	4
RANKIN [0-2pts]	48%	71%
RANKIN [3-5pts]	52%	29%
ASPECT [pts]	8	7
TIBI [pts]	3	4
HA	85%	
DM	39%	
AF	11%	
high cholesterol	95%	

Table 1. Neurological deficit, functional status and risk factors.

Figure 6. Correlation between ASPECT and the TIBI scores on stroke onset (stroke patients only).

Figure 8. Correlation between follow up ASPECT and the TIBI scores on follow up.

Conclusion: ASPECT score is related to TCD flow parameters in the middle cerebral artery stroke, both in hyper- and subacute phase of stroke.

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