

## **INTER-RATER VARIABILITY OF CT ANGIOGRAPHY EVALUATION BETWEEN NEUROLOGIST AND NEURORADIOLOGIST IN ACUTE STROKE PATIENTS**

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**Background:** Occlusion of intracranial artery is an important predictor of the outcome in acute stroke. The diagnosis of occlusion depends on the experience and expertise. However, in the Czech Republic, 45 % of IVT are provided on duty. The aim of study was to assess the inter-observer agreement of the diagnosis of occlusion between neuro-radiologist and non-specialized neurologist.

**Methods:** The CTA scans of all the patients with acute ischemic stroke undergoing IVT were assessed in the study. The images were evaluated for intracranial artery occlusion by two physicians. Both were blinded to clinical findings and to each other. Inter-observer agreement was assessed using kappa index statistics.

**Results:** The CT angiography scans of 75 patients, 34 females, age  $72 \pm 14$ , median baseline NIHSS 10(IQR 8-14) were evaluated in study. 3 months after stroke, 55% patients had mRankin scale  $\leq 1$  and mortality was 10 %. The agreement between the radiologist and the non-specialized neurologist was as follows: occlusion of ACM- agreement 80%, kappa index 0,53; ICA occlusion agreement 93 % , kappa 0.80; ACP occlusion agreement 98%, kappa 0,97; T occlusion agreement 92% , kappa 0,84; AB occlusion agreement 94% , kappa 0,39; occlusion of V4 AV agreement 89%,kappa 0,39.

**Conclusion:** Inter-rater agreement of CT Angiography in acute stroke patients between the non-specialized neurologist and the neuro-radiologist was excellent in anterior and good in posterior circulation. CT angiography is an available and well evaluable method in patients with acute stroke. The method is also reliable outside normal working hours.