

## Understanding ASPECTS of Stroke: Interrater Reliability between Emergency Medicine Physician and Radiologist in a Rural Setup

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**Abstract :** Aims and Objectives: To evaluate the interrater reliability in grading ASPECTS score, between emergency medicine physician at first contact and radiologist among patients with acute ischemic stroke. Materials and Methods: We conducted a retrospective analysis of 86 acute ischemic stroke cases referred to the Department of Radiodiagnosis during November 2014 to January 2016. The imaging (plain CT scan) was performed using GE Bright Speed Elite 16 Slice CT Scanner. ASPECTS score was calculated separately by an emergency medicine physician and radiologist. Interrater reliability for total and dichotomized ASPECTS ( $\geq 6$  and  $< 6$ ) scores were assessed using statistical analysis (ICC and Cohen  $\kappa$  coefficients) on SPSS software (v17.0). Results: Interrater agreement for total and dichotomized ASPECTS was substantial (ICC 0.79 and Cohen  $\kappa$  0.68) between the emergency physician and radiologist. Mean difference in ASPECTS between the two readers was only 0.15 with standard deviation of 1.58. No proportionality bias was detected. Bland Altman plot was constructed to demonstrate the distribution of ASPECT differences between the two readers. Conclusion: Substantial interrater agreement was noted in grading ASPECTS between emergency medicine physician at first contact and radiologist thereby confirming its robustness even in a rural setting.

**Keywords :** ASPECTS, computed tomography, MCA territory, stroke

**Conference Title :** ICR 2018 : International Conference on Radiology

**Conference Location :** Bangkok, Thailand

**Conference Dates :** December 13-14, 2018