in the interventional suite. Color-coded MIP images enable rapid diagnosis and interpretation of large multiphasic CTA data.

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E-042 CAN HEMATOLOGICAL INDICES DIFFERENTIATE BETWEEN STROKE VS. STROKE MIMICS? A RETROSPECTIVE, SINGLE INSTITUTION ANALYSIS

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Introduction/Purpose In the past five years, red blood cell distribution width (RDW) values have been used in cardiovascular research to predict outcomes in patients with atherosclerotic disease. Since large vessel occlusion (LVO) ischemic strokes share a similar pathogenesis to acute coronary artery syndromes, recent studies have attempted to elucidate the relationship between RDW values and acute ischemic strokes (AIS). Thus far, the studies have shown an association between AIS and an increased RDW. We explored this relationship in a subset of patients with a severe neurological presentation at our institution to better understand the clinical significance of RDW in various cerebrovascular pathologies.

Materials and Methods Patients with Rapid Arterial oCclusion Evaluation (RACE) scores >4 were used for this analysis. A retrospective analysis of hematological indices was undertaken with IRB approval. Complete blood counts (CBCs), complete metabolic panels (CMPs), and coagulation studies drawn at the time of ED arrival were reviewed for each patient. For statistical analysis, multi-way ANOVA, t-Tests, and Chi-square analyses were conducted in ‘R’ to assess these indices across different diagnostic groups.

Results This study included 492 patients with pre-hospital RACE scores >4 as identified by EMS in the pre-hospital
setting. Final diagnoses were the following: ischemic stroke (IS) without large vessel occlusion (LVO) - 14.8%; IS with LVO - 37%; TIA - 6.5%; ICH - 13.8%; stroke mimics - 27.9%. We separately analyzed red cell distribution width (RDW), neutrophil count, lymphocyte count, mean corpuscular hemoglobin (MCH), platelet to lymphocyte ratios, and neutrophil to lymphocyte ratios. Patients who suffered from any cerebrovascular accident (CVA) had a lower RDW than mimics (p=0.02). Further analysis revealed RDW to be significantly decreased in the ICH cohort (p=0.002) compared to the stroke mimics, but did not differ from the other diagnoses. When controlling for anticoagulation status or gender, RDW and the platelet-lymphocyte ratios were not significantly different across diagnoses.

Conclusion Although recent studies have implicated a significant relationship between an increased RDW and the occurrence of AIS, our study does not support this finding. Contrarily, with a larger cohort than in those of previous retrospective studies, we found patients with acute cerebral infarcts across all ages to have significantly lower RDW values when compared with stroke mimics. Efforts for the identification of a reliable hematologic biomarker in addition to RACE scores for the timely diagnosis of ischemic stroke remains a priority in the initial pre-admission work-up. CBCs remain rapid and cost-effective tools upon admission, and should be further analyzed to identify other hematologic indices that can aid in the diagnosis of ischemic stroke. Further studies are warranted to completely define how blood tests are implicated in post-stroke outcomes.


E-044 CAPITATED PRICING MODEL FOR STROKE THROMBECTOMIES: A SINGLE INSTITUTION EXPERIENCE

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Introduction With a continued rise in health care expenditures, there is a demonstrable focus on curbing expenses. Recent studies estimate direct and indirect costs of stroke to be $73.7 – 103.5 billion1,2. Since 2015, numerous studies demonstrate the benefit of mechanical thrombectomy (MT) for treatment of large vessel occlusions (LVOs)3-10; however, notable costs are associated with devices utilized in each procedure. Some institutions have negotiated capitated pricing models in an effort to reduce these costs; however, the cost savings has yet to be critically evaluated.