extravascation (χ^2, p = 0.000) and decompressive surgical incidence (χ^2, p = 0.007). But diffusion volume, evaluated cording to 30 cc, 60 cc, 100 cc grading analysis, not predict neurologic outcomes, hemorrhagic complications.

Conclusion In this study, diffusion volume calculation is impossible to calculate without computerized program and clinical significance of diffusion volume was questionable. P/D-mismatch was more significant prognostic indicator than diffusion volume in acute stroke patients management.

Disclosures Y. Won: None. **D. Yoo:** None. **T. Won:** None. **S. Lee:** None.

E-099 DOES ANTERIOR CEREBRAL ARTERY VASOSPASM AFTER SPONTANEOUS SUBARACHNOID HEMORRHAGE PREDICT SHORT TERM COGNITIVE OUTCOME

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Background Spontaneous subarachnoid hemorrhage (SAH) is a disabling form of hemorrhagic stroke that affects young individuals and is responsible for short-term and long-term cognitive deficits. Delayed cerebral ischemia (DCI) is postulated to be the major determinant for this morbidity. Cerebral vasospasm (CVS) is a major contributor of DCI. Treatment of symptomatic CVS can consist of intra-arterial vasodilators or angioplasty. This study reports preliminary data on cognitive outcomes in a prospective cohort of patients with spontaneous SAH who received vasodilator therapy for anterior cerebral artery (ACA) vasospasm.

Aim

1. Determine role of delayed cerebral ischemia (DCI) and CVS after spontaneous SAH on short-term cognitive outcome.
2. Determine if ACA vasospasm predicts short-term cognitive outcome.
3. Determine if treatment of ACA vasospasm results in improvement in short-term cognitive outcome.

Methods Thirty-five patients with clinical follow-up at 3 months after SAH were selected from a prospective cohort. DCI was defined as a new hypodensity on CT scans located in a vascular territory, with or without symptoms (decrease of consciousness or focal deficits), due to CVS and not explained by other causes (e.g. rebleeding, hydrocephalus, cardioembolic sources, hypoxia, electrolyte disturbances, or seizures). CVS was defined as $\geq$25% narrowing on digital subtraction angiogram (aCVS) or Transcranial Doppler mean flow velocity $\geq$120 cm/sec (sCVS). Cognitive outcomes were assessed using Montreal Cognitive Outcome Assessment (MOCA) and poor cognitive outcome was defined as MOCA score <26. Fisher's exact tests and logistic regression were performed to analyze the study questions.

Results Average age of the study cohort was 53.1 ± 11.5 years with 71% of the patients being women. DCI occurred in 16/35 (45.7%) patients. In the absence of sCVS, DCI predicted poor cognitive outcomes (3/5 with DCI, 60% vs 1/10 without DCI, 10%; p = 0.04). Patients with anterior cerebral artery or anterior communicating complex (ACA/ACom) related aneurysmal SAH were less likely to have MOCA < 26 (ACA/ACom vs others (3/12, 25% vs 11/23, 47.8%; p = 0.28). Of the 22 patients who underwent digital subtraction angiogram for clinical indication, 10 were found to have ACA CVS and were treated. Patients with SAH due to ACA/ACom location aneurysms displayed low MOCA scores less often than those with SAH in other locations (2/5; 40% vs 4/5; 80%; p = 0.15). A two-factor logistic regression model found that, while holding treatment status constant, the odds of a poor cognitive outcome were 4.6 times higher (90% CI on odds ratio: 1.0, 21.3; p = 0.0998) among those with SAH outside of ACA/ACom aneurysms.

Conclusions Our study reaffirms that occurrence of DCI after SAH predicts poor cognitive outcome at 3 months. The fact that cognitive outcomes were not superior in patients treated for CVS suggests that a complex pathophysiology determines outcomes after SAH. Relatively poor cognitive outcome among patients with SAH in locations other than ACA/ACom alludes to involvement of functional neural network apart from frontal lobe based networks that needs further investigation.

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E-100 USE OF THE 0.027 VIA MICROCATHETER FOR PIPELINE EMBOLIZATION OF CEREBRAL ANEURYSMS: A TECHNICAL NOTE

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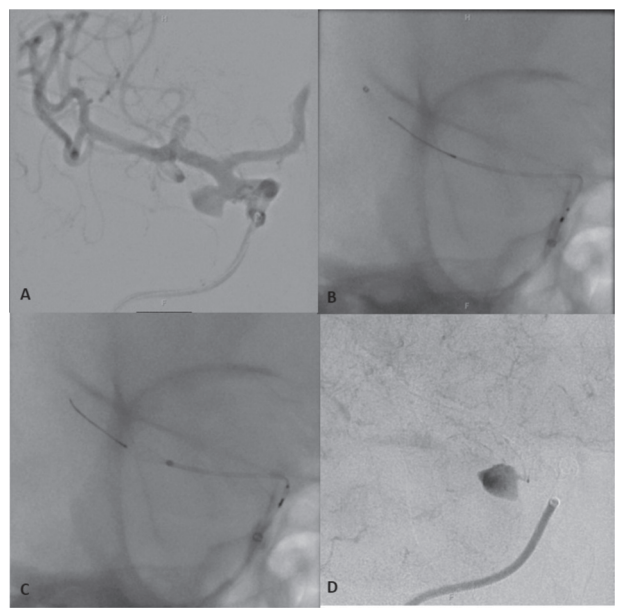
Introduction Pipeline embolization devices (PEDs) are designed for delivery through a 0.027" microcatheter such as the Marksman (Medtronic). Challenges with second generation FlexPEDs include limited support from the Marksman for consistent resheathing and providing enough push for delivery.



Abstract E-100 Figure 1 (A) Angiogram demonstrates a R Pcomm aneurysm. (B) Introduction of the PED. The distal PED was opened in the MCA and withdrawn back into the supraclinoid ICA. (C) Deployment of the PED across the aneurysm neck. (D) Post-deployment angiogram shows significant contrast stasis.