prevalence and natural history in a cohort of patients undergoing PED aneurysm treatment at our institution.

Materials and Methods 465 consecutive patient undergoing PED embolization of intracranial aneurysms between November 2011 and October 2021 were identified. Only patients with follow up catheter angiography performed within three months of treatment were included given the transient nature of the phenomenon. Also, patients who were not compliant with antiplatelet medications were excluded due to their high incidence of intimal hyperplasia. Changes in PED mechanical configuration and presence of intimal hyperplasia were noted. Treatment outcomes were also assessed.

Results 61 PED procedures performed in 60 patients met criteria. PED mechanical narrowing was observed on follow up imaging in 18/61 treatments (29.5%). Median percentage device narrowing was 16.5% and it was greater than 20% in 6 cases. Among patients with mechanical narrowing, some also demonstrated mild intimal hyperplasia, which was not hemodynamically significant. Mechanical narrowing either completely, or mostly, resolved within one-year of treatment in all instances. There were no complications associated with the phenomenon. It is unclear if the transient mechanical changes occurs in response to the initial intraoperative manipulation or secondarily manifests from the vessel wall reaction and will be a part of future study.

Conclusions Early changes in PED mechanical configuration following deployment appear to be common. Our initial results suggest the phenomenon is transient and not associated with complications. It is unclear if the transient mechanical changes occur in response to the intraoperative manipulation (s)/maneuvers to the stent or a secondary manifestation of transient, exuberant vessel wall reaction during active endothelialization process. It will be our endeavor to study this in a systematic fashion in future studies.