Flow-Diversion For Complex Middle Cerebral Artery Aneurysms.



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Introduction

To evaluate the safety and efficacy of pipeline embolization device (PED) for treatment of large and complex middle cerebral artery (MCA) aneurysms

Methods

We conducted a retrospective review of the clinical charts of all patients who underwent PED placement for aneurysm at our institution from October 2010 to October 2013. We included 10 patients of which 5 had large MCA aneurysms and 3 had giant ones. Fusiform unruptured aneurysms represented 7 of all 10 aneurysm. Angiographic and clinical follow-up were available for all patients mostly between 7 and 12 months.

Results

We had no technical complications, no periprocedural morbidity and mortality. On follow-up we had no hemorrhagic complication, no aneurysm rupture and only one clinically significant thromboembolic event in a patient who discontinued antiplatelet therapy against medical advice. One patient had completely occluded his diseased vessel but remained asymptomatic. The overall complication rate was 30% (3/10). The complete occlusion rate was 77.77% (7/9).

Conclusions

PED treatment for large, giant and bifurcation MCA aneurysms was successful, with favorable complete-occlusion rate, no mortality and a low morbidity rate.

Learning Objectives

PED treatment for MCA aneurysms has favorable outcomes with satisfying complete occlusion rates

PED use in MCA was associated with a low complication rates.

No patient expired in our study

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