

# Distal cerebral circulation aneurysm

Distal cerebral circulation aneurysms (DCCAs) remain treatment challenges for [endovascular treatment](#). The off-label use of the [pipeline embolization device](#) (PED) for these aneurysms remains controversial. This study aimed to evaluate the safety and efficacy of PED for DCCAs in a multicenter cohort of patients.

Between March 2016 and June 2021, Ma et al. retrospectively analyzed the neuro interventional data on the clinical and radiological records of all patients undergoing PED treatment of DCCAs at three medical centers.

A total of 53 consecutive patients with 53 DCCAs were treated with PED. The mean aneurysm size was  $12.3 \pm 5.7$  mm. In total, 75.4% (40/53) were fusiform and 24.5% (13/53) were saccular. Of these, 17.0% (9/53) were recurrent aneurysms that were previously treated with endovascular or microsurgical approaches. The technical success rate was 100%, among which 81.1% (43/53) procedures were completed with a single PED, and the rest (10/53, 18.8%) required telescoping with two devices. Angiographic follow-up data were available for 51 patients, with a median follow-up time of 12 months. At the latest follow-up, 46/51 (90.2%) aneurysms showed complete obliteration, and 4/51 (7.8%) showed reduced filling. Periprocedural complications such as hemorrhage were observed in two patients with MCA aneurysms (3.8%, 2/53), and ischemic events occurred in six patients (11.3%, 6/53). The overall mortality and morbidity rates were 7% (4/53).

PED is a viable option for treating DCCAs, especially for recurrent aneurysms. Coverage of bifurcation branches and perforator may increase the risk of complications <sup>1)</sup>.

<sup>1)</sup>

Ma C, Zhu H, Liang S, Liang F, Han J, Jia Z, Zhang Y, Jiang C. Pipeline for the treatment of distal cerebral circulation aneurysms: A multicenter study focusing on periprocedural Complications. Interv Neuroradiol. 2021 Dec 16:15910199211063703. doi: 10.1177/15910199211063703. Epub ahead of print. PMID: 34913765.

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