Background and Purpose The Pipeline Flex Embolization Device with Shield Technology (PEDS) is an updated version of the Pipeline Flex Embolization Device (PED) which has been modified to include a surface phosphorylcholine biocompatible polymer. It was already reported PED was less effective in recurrent previously stented cerebral aneurysms using Neuroform stent or Enterprise stent than in nonstented aneurysms. However, there is no data regarding PEDS for recurrent previously stented cerebral aneurysms using LVIS stent. The aim of this study was to evaluate the efficacy and safety of the PEDS in the treatment of recurrent previously stented aneurysms using LVIS stent.

Materials and Methods We retrospectively analyzed four consecutive patients (mean age, 52.0 years; all female) who underwent PEDS placement for recurrent previously stented cerebral aneurysms using LVIS stent between January 2020 and February 2021. Two aneurysms were located in the internal carotid artery, two aneurysms in the vertebral artery. The mean size of the aneurysms was 18.7 mm (range, 14-23). Technical success rates, symptomatic stroke within 30 days, occlusion at the latest follow-up angiogram and late adverse events (recurrence and retreatment rates, and strokes or neurologic deaths) were analyzed.

Results The technical success rate was 100%. No symptomatic stroke developed within 30 days. During a mean follow-up period of 5.3 months, complete occlusion was achieved in 3/3 (100%) and no late adverse events occurred.

Conclusions The PEDS may become treatment option for recurrent previously LVIS stented cerebral aneurysms.

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