Coincidental aneurysms in the target vessels of stroke patients with large vessel occlusions (LVO) may pose risks during endovascular mechanical thrombectomy (MTE), but there are almost no data on this subject. Motivated by an incident of rupture of a hidden aneurysm induced by withdrawal of a stent retriever during a MTE procedure, this study examines the prevalence of aneurysms, associated complications, and implications for treatment strategies in patients with LVO stroke. A single-center retrospective analysis of angiographic and CT/MRI images and case records of 300 consecutive patients with LVO stroke treated with MTE was performed. Aneurysms related to target vessels were detected in 11/300 patients, in 10/11 in the anterior circulation. In 9/11 patients the aneurysms were unknown prior to the stroke. The observed prevalence was >2-fold higher than expected for a healthy reference population. There was one complication (aneurysm rupture), as described above. In two subsequent patients with known aneurysms, MTE was conducted mainly with aspiration techniques which failed, contributing to a low recanalization rate in patients with aneurysm (45%). The prevalence of aneurysms is relatively high in patients with LVO stroke, particularly in older, female, hypertensive patients, presumably reflecting overlapping risk factors. MTE should not be withheld.
from patients with LVO stroke with aneurysms, but particularly cautious approaches may be warranted. Further research in larger samples is required to obtain precise data on the prevalence and associated complication rates in MTE procedures. This is necessary to estimate the true risk and to tailor endovascular strategies in these patients.