Abstracts

Do you have any conflict of interest to declare?: Yes
Conflict of Interest Statement FD serves as a Proctor/Consultant for Cerenovus, Balt, Cerus Endovascular, Stryker and Acandis.
HN serves as a Proctor/Consultant for Acandis und Balt.

Introduction

Despite overall high recanalization success, mechanical thrombectomy is unsuccessful in 12 to 41% of patients. The Nimbus device was designed to effectively remove specifically fibrin-rich clots, which often cannot be removed by conventional stent retrieval and/or aspiration procedures. High effectiveness was demonstrated in the model.

Aim

To evaluate the clinical experience and recanalization success with Nimbus as a second line device after failed stent-retriever thrombectomy of large vessel occlusions.

Methods

Consecutive Nimbus cases from one high volume stroke center were retrospectively analyzed.

Results

Nimbus was used in 20 patients with acute large vessel occlusion (12 M1-, 8 M2-segment) after unsuccessful recanalization attempts with conventional stent-retrievers (average 2.36 passages, maximum 6). In 10/20 patients (50%), Nimbus resulted in a TICI 2b-3 outcome with an average of 2.3 passages (maximum 5). Five of the 10 successful cases were achieved with one single Nimbus pass (50%).

Conclusions

The use of Nimbus resulted in a good recanalization outcome in 50% of patients and is therefore a rescue option in otherwise unsuccessful recanalization procedures.

References


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In-vitro Evaluation of Aspiration Parameters When the Large Bore Aspiration Catheter is Combined with the Use of a Stent Retriever


Introduction

In clinical practice, the combination of stent retriever and aspiration catheter has been shown to be effective in the treatment of acute ischemic stroke. However, it remains unclear how to maximize the use of the two thrombectomy systems when combined.

Aim of study

The purpose of our study was to evaluate how microcatheter and stent retriever interact with the aspiration catheter and how basic aspiration parameters are influenced.

Methods

Two in-vitro set-ups were designed to evaluate the aspiration force and flow-rate of each aspiration catheter in the presence of the stent retriever and microcatheter inside.

Results

The presence of the stent retriever and microcatheter inside the aspiration catheter reduced the flow-rate but the removal of the microcatheter allows implementation of the flow-rate. Stent retriever diameter and length had no effect on changes in flow-rate. The aspiration force was not affected by the presence of the stent retriever and microcatheter.

Conclusions

Although the combination of stent retriever and aspiration catheter is effective in both clinical and in-vitro studies, the knowledge of how certain variables, such as flow-rate and aspiration force change as a result of the presence of stent retriever and aspiration catheter within the aspiration catheter, may be useful in implementing the combined technique in clinical practice.

References

1. Stroke Vasc Neurol 2021;6:553–60. DOI: 10.1136/svn-2020-000833 [Published Online First: 2021/03/31]