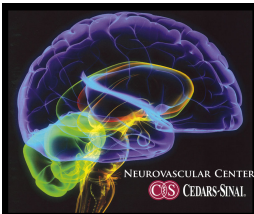


# ADAPT technique for revascularization in large vessel occlusion: Single center series of 16 consecutive patients

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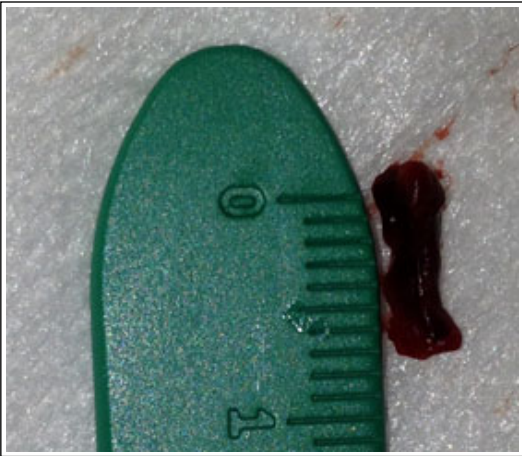
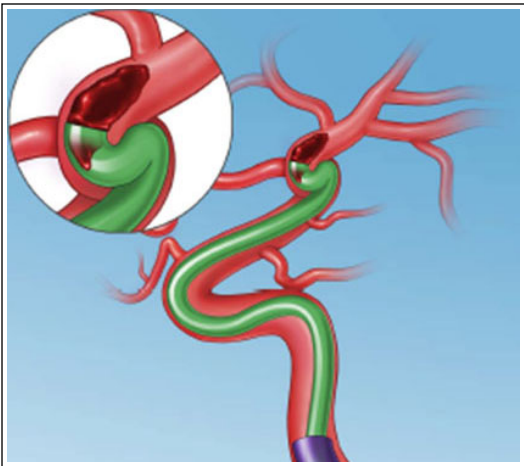


## Introduction

The ADAPT technique utilizes a large aspiration catheter for direct clot extraction in acute large vessel occlusion in ischemic stroke, without clot disruption or maceration.

## Methods

This was a prospective study utilizing the ADAPT technique for mechanical thrombectomy in patients with occlusion of the intracranial internal carotid artery, middle cerebral artery, vertebral artery, or basilar artery within 8 hours of onset of symptoms. The ACE catheter was used in 15 cases, and the 4 MAX catheter in one case. In three cases, the use of an adjunctive stent retriever was necessary for clot retrieval. All patients had pre and post NIHSS assessments and delayed mRS grading. Post-procedure imaging was performed at 24 hours in all patients.



## Results

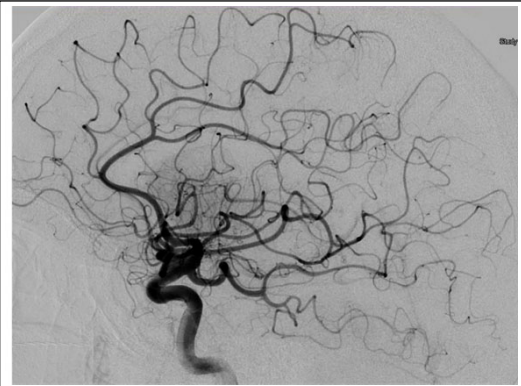
The ADAPT technique alone resulted in successful revascularization in 81% of the patients. Additional use of a stent retriever was used in the remaining patients. The average number of passes for the ADAPT technique was 1.5 with an average revascularization time of 17 minutes from groin puncture. A TICI 2b or 3 was achieved in 93.8% of patients using ADAPT and secondary stent retriever. On clinical follow up, 68% of patients had mRS 2 or less, with 25% of patients with an mRS of 0. There were two patients who died. The mean NIHSS prior to revascularization was 17, and following the procedure, the mean NIHSS was 5. See results in table.

*Clot extracted from ADAPT technique without maceration on fractionation*

*Pre-treatment carotid terminus occlusion with preservation of the posterior communicating artery.*



*One pass with ADAPT technique using the 5 MAX ACE aspiration catheter results in TICI 3 revascularization 6 minutes following groin puncture.*

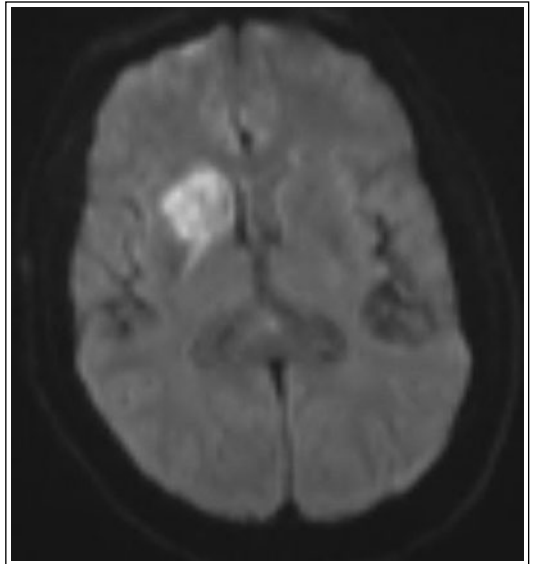


Location	NIHSS pre ADAPT	ADAPT passes	Time to revasc minutes	Stent retriever used	TICI result	NIHSS post	30 day mRS
MCA	11	2	18	no	2b	7	2
ICA	22	1	14	no	3	2	1
ICA	18	1	13	no	3	4	1
Vert	6	2	24	no	3	0	0
MCA	18	1	21	yes	2b	6	3
ICA	18	1	6	no	3	3	2
MCA	13	3	42	yes	2a	8	4
ICA	25	2	18	no	2b	6	6
MCA	8	1	8	no	3	0	0
ICA	16	1	10	no	3	2	1
ICA	15	2	17	no	2b	1	2
MCA	18	1	13	no	3	3	2
Basilar	28	3	28	yes	2b	28	6
ICA	20	2	21	no	3	1	0
MCA	24	1	10	no	2b	7	3
MCA	12	1	12	no	2b	0	?
Average	17	1.5	17.2	18%	94%	5	2.1

## Conclusions

The ADAPT technique as a first line endovascular therapy for acute large vessel stroke results in rapid revascularization, high percentage full revascularization, and markedly improved clinical outcomes, compared to either the IV tPA alone group or Interventional cohort in IMS3.

*24 hour post procedure MRI shows stroke from M1 lenticulostriate, but no other infarct*



## Learning Objectives

- Understand the basic technique of the ADAPT procedure
- Learn of the potential benefits of this technique vs. other mechanical thrombectomy techniques
- Understand the limitations of the ADAPT technique

## Reference

Turk AS, Frei D, Fiorella D, et al. ADAPT FAST Study, JNIS 6(4) 260-4, 2014.