



# NEVA SAVES THE DAY AFTER A 5-PASS ORDEAL

NeVa™ 4.5 x 37 mm

Bucharest University Emergency Hospital Stroke Team



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## PRESENTATION

80 year old male patient presented with a NIHSS of 24, 4hr15min after symptom onset.

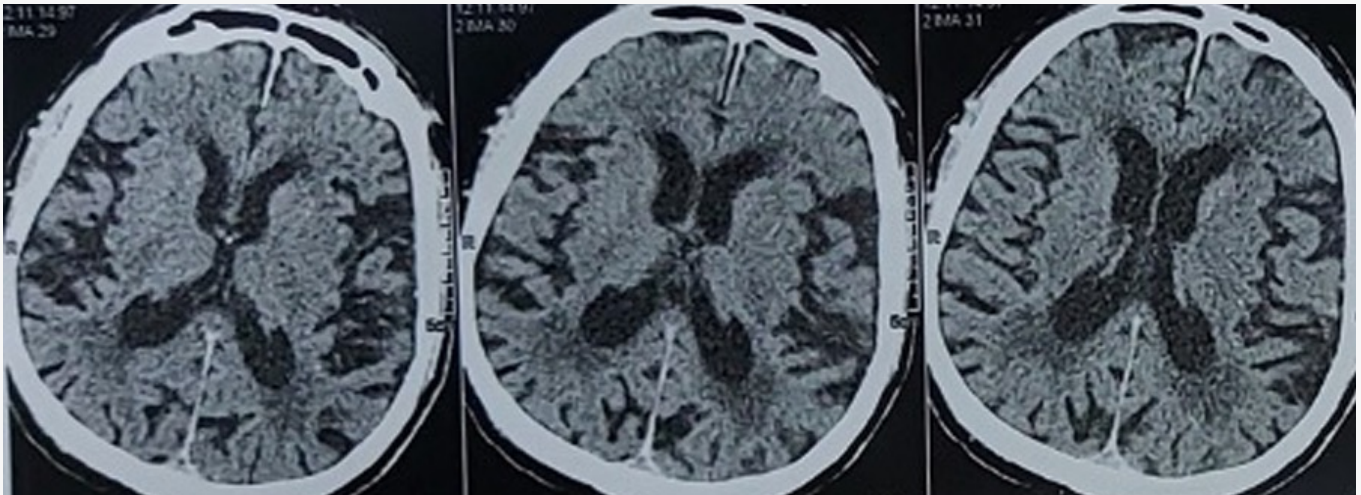
The patient was transferred to the Bucharest University Emergency Hospital after tPA administration in secondary center.

Imaging confirmed occlusion of the left M1 segment.

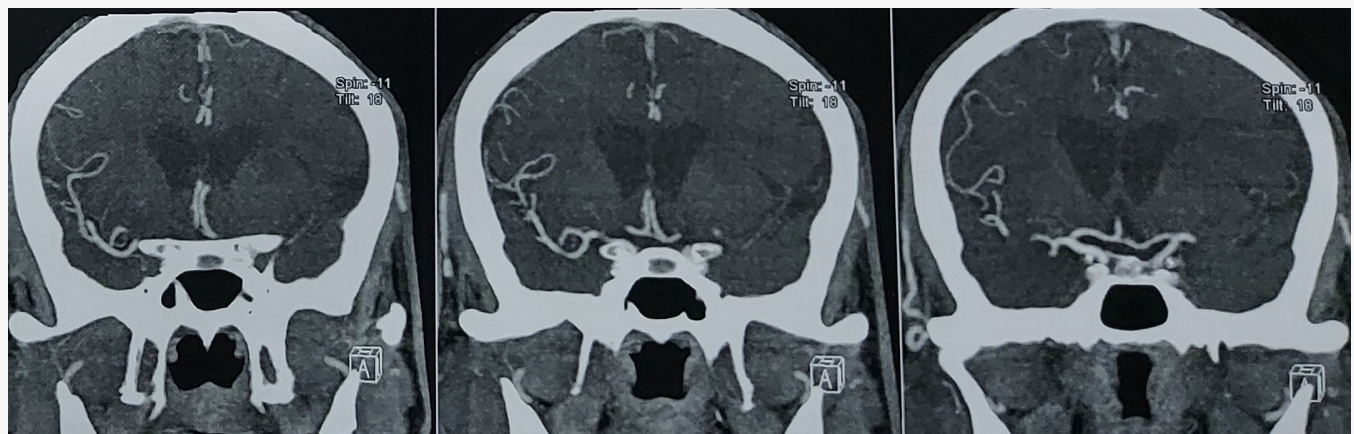
### NIHSS at admission

1a Level of Consciousness	0
1b LOC Questions	2
1c LOC Commands	2
Best Gaze	2
Visual Fields	2
Facial Palsy	2
5a Left Motor Arm	0
5b Right Motor Arm	4
6a Left Motor Leg	0
6b Right Motor Leg	3
Limb Ataxia	0
Sensory	2
Best Language	3
Dysarthria	2
Extinction and Inattention	0
<b>Total</b>	<b>24</b>

## PRE-OP CT



Pre-op CT confirmed acute ischemic stroke with some early ischemic changes in the deep left MCA territory. ASPECTS score of 7



CTA confirmed left MCA occlusion in the M1 segment. Poor collateral flow was noted.

## SUMMARY OF TREATMENT

IV-tPA was administered at secondary center prior to the patient being transferred to the Bucharest University Emergency Hospital for mechanical thrombectomy.

Femoral approach was used for access and the team decided to use a 9-French balloon guide catheter (BGC) as a flow control strategy. Aspiration was done through the BGC during retrieval. A 0.027" microcatheter was used for device delivery.

**5 thrombectomy passes were done with no improvement on the initial TICI-0 occlusion status:**

- The initial 3 passes with a 4.0 x 32 mm stent-retriever,
- 2 additional passes with a 6.0 x 40 mm stent-retriever

**For the 6th pass, a Neva 4.5 x 37 mm was used. Initially, NeVa was incorrectly positioned (too proximally – thrombus at level of distal basket). After correct positioning, complete recanalization (TICI 3) of the occlusion was achieved with a single pass.**

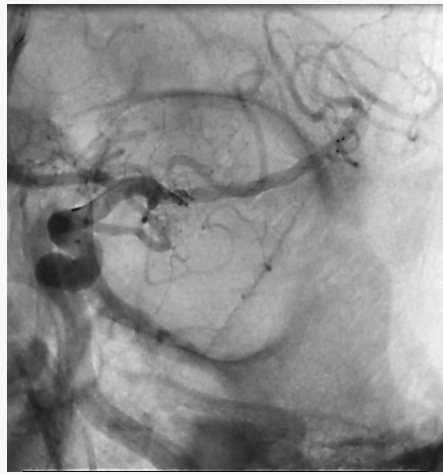


## 5 PASSES PRIOR TO NEVA USE

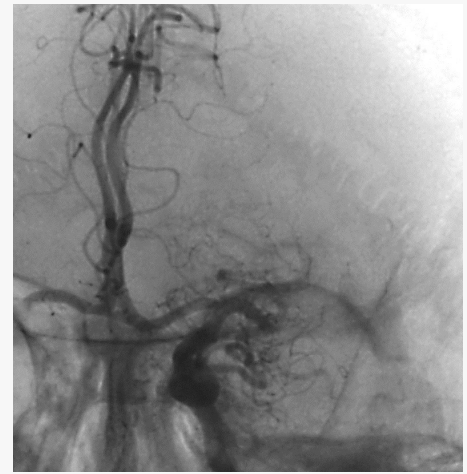
9F Balloon Guide Catheter was placed in distal ICA. After 5 successive passes with two different stent-retrievers (4.0 x 32 mm and 6.0 x 40 mm) the initial left-M1 occlusion remained in place.



Initial angio showing the left-M1 occlusion

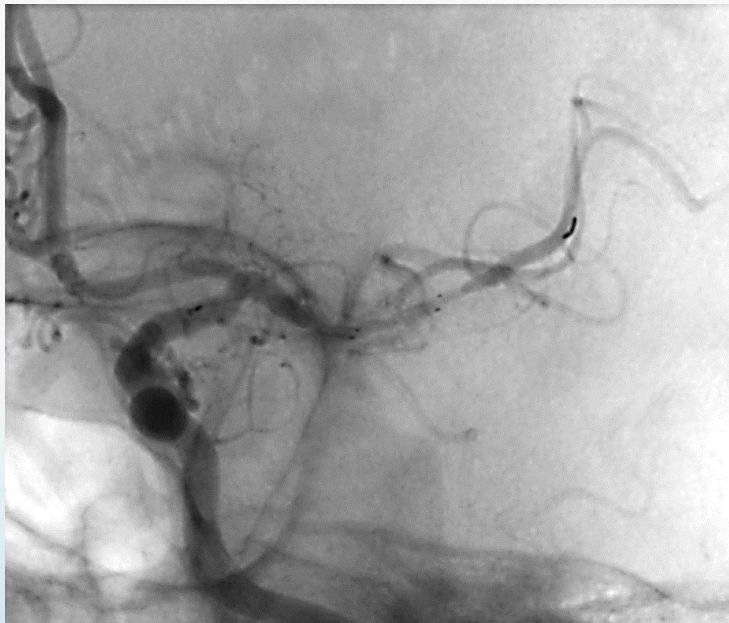


A pass with a 4.0 x 32 mm stent retriever positioned in the MCA



Angio after 5 passes with conventional stent retrievers, showing lack of recanalization (still TICI 0)

## THE NEVA PASS



NeVa 4.5 x 37 mm positioned across the upper branch of the MCA



Angio showing TICI 3 complete reperfusion with slight, non-flow-limiting vasospasm of the upper MCA branch. The vasospasm resolved spontaneously without recourse to medication



"White" thrombus was observed partially inside Neva device

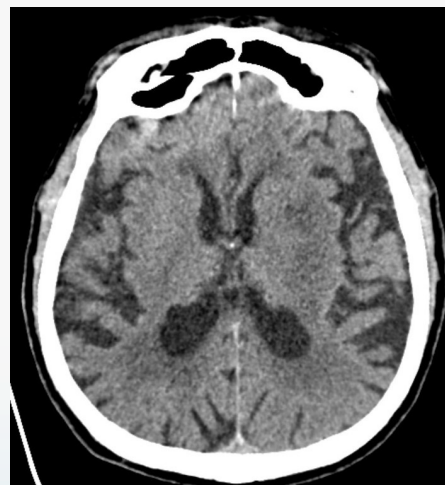


Position of "bifurcated" thrombus shown for reference

## POST OP CT



12-hour Post-op CT shows contrast staining of the lenticular nucleus



48-hour Post-op CT shows infarction of the deep territory – also partially visible on pre-Op CT, with a slight petechial hemorrhage. No other ischemic changes.





## PROCEDURAL STATISTICS

Last Seen Well	09:30
<b>Admission to 2ndary center</b>	11:57
CT/MRI	12:11
IV-TPA	12:21
<b>Admission to Bucharest University Emergency Hospital (Door)</b>	13:45
<b>Femoral puncture</b>	14:00
<b>Recanalization</b>	15:40

Door-to-Puncture: 15 minutes		Last-Seen-Well to-Recan: 380 minutes (6 hr 10 min)
Puncture-to-Recan: 100 minutes (1 hr 40 min)	Door-to-Recan: 115 minutes (1 hr 55 min)	

## CLINICAL OUTCOME

24 hour NIHSS of the patient was 23, which later improved to 18.

The patient remained hospitalized with signs of aspiration pneumonia unrelated to the thrombectomy.

At VESALIO, we feel blessed to be part of the stroke field where together with these dedicated stroke teams, we can make an incredible impact on people's lives.

Thank you Bucharest University Emergency Hospital stroke team: Dr. Bogdan DOROBĂȚ, Dr. Adela DIMITRIADE, Dr. Alexandra CARP, Dr. Andrei SIMONOV, and Dr. Mihai IONESCU.

### 24-hour NIHSS

1a Level of Consciousness	1
1b LOC Questions	2
1c LOC Commands	2
Best Gaze	2
Visual Fields	2
Facial Palsy	2
5a Left Motor Arm	0
5b Right Motor Arm	3
6a Left Motor Leg	0
6b Right Motor Leg	2
Limb Ataxia	0
Sensory	2
Best Language	3
Dysarthria	2
Extinction and Inattention	0
<b>Total</b>	<b>23</b>