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# **ACUTE STROKE TREATMENT IN BASILAR ARTERY OCCLUSION PATIENTS.**

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BACKGROUND

Acute basilar artery occlusion (BAO) is a relatively infrequent (1% to 4%) form of acute ischemic stroke, but often cause of severe and persisting neurological deficit and high mortality rate (to 86%) without recanalization [1]. Frequently, the diagnosis is delayed because of unusual first clinical presentation, like dizziness (67%), ataxia (52%), headache and/or neck pain (43%), nausea and/or vomiting (38.1%), and generalized weakness (29%) [2]. For its potentially debilitating outcome, BAO has been managed aggressively with revascularization therapies up to 12-24 hours after symptom onset [3].

### **MATERIALS AND METHODS**

We report the experience of our Stroke Unit since february 2014 to april 2016. 9 patients (5 F, 4 M; median age 66) with BAO **Undergone to:** 

- neurological investigation;
- neuroimaging (brain CT/RM, angiography, U.S.)
- different revascularization methods:
  - i.v. thrombolysis (IVT) and/or
  - i.a. thrombolysis (IAT) with r-TPA and/or
  - mechanic thrombectomy (IA-MT) with or without BA stenting (BAS);

We calculated:

- time window (tW) between symptoms onset and treatment
- difference between NIHSS at patients entrance and at discharge from Stroke Unit ( $\Delta$ NIHSS)

#### RESULTS 1) <u>IVT,</u> tW 3 hours, $\Delta NIHSS 9;$ 2) <u>IVT + IAT,</u> tW 4 hours, <u>ΔNIHSS 5;</u> 3) <u>IA-MT</u>, tW 6 hours, $\Delta NIHSS 12;$ 4) <u>IA-MT</u>, <u>tW 10 hours,</u> $\Delta NIHSS 6;$ 5) <u>IVT + IA-MT,</u> <u>tW 4 hours,</u> <u>∆NIHSS 2;</u> 6) <u>IA-MT + BAS,</u> tW 7 hours, <u>∆NIHSS 5;</u>

7) <u>IA-MT + BAS,</u> tW 5 hours,  $\Delta$ NIHSS 2; 8) <u>IAT + IA-MT,</u> <u>tW 11 hours,</u>  $\Delta NIHSS 11;$ 

9) no treatment, time of hospitalization 15 hours, patient death.

### CASE 8 F 51 y.o.; GCS: 8; NIHSS: 13; Symptoms onset 06:30 AM

FIGURE 2:

FIGURE 3: **Revasculation** 

FIGURE 4: CT scan at 24 h

FIGURE 1: Brain RM – DWI at 16:45 (10:15 hours)





Our results show, like reported in literature, the effectiveness of reperfusion treatment in patients with BAO also over the conventional therapeutic time window.

## REFERENCES

1. [1] Schonewille WJ, Wijman CA, Michel P, et al. Treatment and outcomes of acute basilar artery occlusion in the Basilar Artery International Cooperation Study (BASICS): a prospective registry study. Lancet Neurol. 2009; 8:724–30.

2. [2] Burns JD, Rindler RS, Carr C, Lau H, Cervantes-Arslanian AM, Green-LaRoche DM, Salem R, Kase CS. Delay in Diagnosis of Basilar Artery Stroke. Neurocrit Care. 2016 Apr; 24(2):172-9.

