

ANESTHETIC MANAGEMENT DURING THROMBECTOMY FOR POSTERIOR CIRCULATION ISCHEMIC STROKE: A DESCRIPTIVE ANALYSIS

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Argomento: Neuroanestesia e neuroranimazione

BACKGROUND

Some important RCTs have recently demonstrated efficacy and safety of endovascular thrombectomy (EVT) for posterior stroke circulation (PCI). Anesthetic management in this setting is currently a debated topic and practice remains largely based on local protocols. The reason is that patients with PCI may have a deep alteration of consciousness and may have airway protection impairment. Thus we reviewed our population of PCI by dividing them by anesthetic management, also evaluating the efficacy and safety of the procedure.

MATERIALS AND METHODS

We extracted all EVT performed between January 2017 to October 2022 from our database, extrapolated those pertaining to the posterior circulation and divided them by type of anesthetic management: General anesthesia (divided into two subgroups: "elective IOT" meaning patients who were intubated only to receive the procedure and "already IOT" namely patient who were already intubated for reasons other than EVT), sedation, and those cases converted from sedation to GA. Continuous variables were reported as mean or median. Categorical variables were reported using absolute and relative frequencies.

RESULTS

Of the 1419 patients present in the DB, 129 are PCIs. Patients initiated under sedation are half of the total and have a better clinical presentation and imaging than GA (NIHSS 6-10 Vs 12-13, PC ASPECT 9-10 Vs 8-9 respectively). Sedation has a faster onset time and does not appear to prolong the procedure by itself. GA and sedation result in good reperfusion in 90% of cases while conversion in 73%. In about half of the cases the need for conversion is due to neuroradiological complications.

CONCLUSIONS

Sedation is a feasible and time-sparing anesthetic management in a selected population; selection has to be made on the basis of the clinic and of neuroimaging, paying particular attention to mid-distal and multivessel occlusions.

	General Anesthesia		Sedation		Overall	P value
	Already OTI	Elective OTI	Sedation	Conversion		
Patients, n°	57	11	48	13	129	
Age, yr, median (1°- 3°)	72 (56 – 79)	60 (32 – 79)	71 (61-77)	71 (62-81)	71 (58-79)	0,68
Sex, Male, n° (%)	39 (68)	7 (64)	26 (54)	9 (75)	81 (63)	
NIHSS, median (1°- 3°), mean (SD)	13 (8 - 30) 16 (12)	12 (5-20) 12 (8)	6 (4-14) 9 (7)	10 (3-15) 10 (6)	9 (4-15) 11 (8)	0,04
PC- Aspect score, median (1°- 3°)	9 (7-10)	8 (7-10)	10 (9-10)	9 (6-10)	9 (8-10)	<0,01
Site of occlusion: Proximal, n° (%) Middle, n° (%) Distal, n° (%)	6 (11) 15 (26) 36(63)	1 (9) 4 (36) 6 (55)	12 (25) 8 (17) 28 (58)	2 (15) 6 (46) 5 (39)	21 (16) 33 (26) 75 (58)	0,14*
Multivessel occlusion, n° (%)	21 (37)	7 (64)	11 (24)	7 (54)	46 (36)	0,20*
Ethiology: Atherosclerosis, n° (%) Embolic, n° (%) Others, n° (%)	13 (23) 41 (72) 3 (5)	4 (36) 5 (46) 2 (18)	12 (25) 31 (65) 5 (10)	6 (46) 4 (31) 3 (23)	35 (27) 81 (63) 13 (10)	0,39*
OR-To-Groin, min, median (1°- 3°)	22 (16 – 35)	26 (16-44)	17 (15-21)	15 (10-38)	20 (15-28)	<0,01
Groin-To-Reperfusion, min, median (1°- 3°)	36 (20 – 66)	61 (44-71)	27 (21-55)	102 (90-164)	36 (21-69)	<0.01
TICI, ≥2b-3, n° (%)	49 (90)	10 (90)	42 (89)	8 (73)	109 (88)	0,59*
Neuroradiological complications, n° (%)	8 (14)	0	8 (16)	6 (46)	22 (17)	0,10*

Table 1. Characteristics of the population undergoing posterior circulation thrombectomy. GA = General anesthesia. Elective OTI=intubated for the procedure. Already OTI=intubation occurred for reasons other than thrombectomy. NIHSS=National Institutes of Health Stroke Scale. PC-Aspect score=posterior circulation Acute Stroke Prognosis Early Computed Tomography Score. OR=operating room. TICI=thrombolysis in cerebral infarction. *=due to the small sample, categorical variables were grouped (GA vs Sedation) to allow comparison with the chi-square test.