Category :**Cardiovascular: Other**

A124 - ***High and intermediate-high pulmonary embolism treated with alteplase in a tertiary hospital acute intermediate care unit.***

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Introduction:

Systemic fibrinolysis (SF) is well accepted in hemodynamically unstable patients with acute PE. The guidelines advice that SF should be reserved for high risk PE and for those with intermediate risk that evolved with hemodynamic instability.

Methods:

Retrospective review of acute PE treated with 100mg rtPA (2010-2019) in an acute intermediate care unit.

Results:

Revision of demographic, clinical and imaging data, bleeding events and 30 days mortality of 98 patients; 68.4% female, mean age 62.96y(±19.43, door-to-needle time 727min(±559min). Minor bleeding: 27(27.6%), major bleeding: 6(6.1%).No intracranial or fatal events found. Mortality of 7.1% at 30 days.Comorbidities and VTE risk factors: obesity 39.7%, HF 22.4%,peripherical venous insufficiency 19.4%,COPD 4.1%, active cancer 10%, autoimmune disease 7.1%, major surgery 10.2%, immobilization 17.3%, previous VTE 9.2%.Intermediate-risk PE 65(66.3%) and high-risk PE 33(33.7%) according to current guidelines.Initial TTE (documented in 90%): RV dysfunction 88.6%, RV dilation 90.9%. AngioCT: RV/LV coefficient 1.63mm(±0.46). High PE are older (69.61±16.99 vs. 59.58±19.84, p=0.015) and more associated with active cancer (70% vs 29.5%,p=0.013), higher lactate and urea, lower PaO2/FiO2 and statistical difference in arterial pH (table).Dead at 30days: the former showed lower baseline Hb and arterial pressure, and higher FiO2 needs.

Conclusion:

The authors highlight the absence of ICH in patients undergoing SF and the low percentage ofmajor bleeding, compared to that found in the PEITHO study[1] and in the international registryI COPER [2]. This could be explained by the non-overlapping of rtPA with hypocoagulation,which explains our high time door to needle.The authors are convinced that thrombolysis could be considered in asubgroup of patients with intermediate risk PE with tachycardia, lactatemia and left preload compromise, despite the absence of hypotension or shock.

References:

1. Meyer, G., et al. *N Eng J Med* 370: 1402–1411
2. Goldhaber, S., et al. *Lancet* 353: 1386–1389.

Table:

	High vs intermediate- risk	p value	Death by day 30 vs alive at day 30	p value
Systolic arterial pressure at unit admission(mmHg)	108.30 SD 23.47 vs. 127.71 SD 17.95	<0.001	85.75mmHg SD 29.87 vs 123.07 SD 19.59	<0.001
Diastolic arterial pressure at unit admission(mmHg	61.74 SD 13.97 vs. 73.37 SD 12.53	0.001	47.75mmHg SD 15.71 vs. 70.62 SD 12.93	0.001

PaO2/FiO2 ratio at hospital admission	224.133 SD 64.448 vs. 281.314 SD 77.489	<0.001	223.82 SD 93.47 vs. 265.09 SD 77.03	0.252
FiO2 (%) at hospital admission	38.13 SD 20.668 vs. 29.66 vs.17.408	0.057	47.50 SD 20.39 vs. 31.33 SD 18.38	0.041
Lactate initial levels (mmol/L)	2.873 SD 2.1339 vs. 1.783 SD 1.2276	0.013	2.467 SD 1.583 vs. 2.120 SD 1.666	0.622
Hemoglobin (g/dL)	12.60 SD 1.99 vs. 13.55 SD 1.86	0.017	11.50 SD 2.48 vs. 13.35 SD 1.74	0.017
Urea at unit admission (mg/dL)	62.58 SD 35.24 vs. 47.84 SD 29.77	0.046	91.67 SD 62.09 vs 50.38 SD 28.10	0.165

Comparison between high vs intermediate-risk pulmonary embolism