

Table 1 – Characterization of inpatient and outpatient groups

	Outpatient (n=21)	Inpatient (n=8)	Total (n=29)	p
Age (years)				
Average	15.95	9.47	14.13	
<1	0	1 (12.5%)	1 (3.6%)	0.003
1-9	0	3 (37.5%)	3 (10.7%)	
>10	21 (100%)	4 (50%)	24 (85.7%)	
Sex (F)	14 (67%)	3 (37.5%)	17 (58.6%)	0.184
Risk factors				
	N=20 ^f		N=28 ^f	
Inherited thrombophilia ^a	7 (35%)	0	7 (25%)	0.119
APS	3 ^g (15%)	0	2 (7.1%)	0.246
Obesity	4 (20%)	0	4 (14.3%)	0.172
CHC; for <1y	13 (65%); 11 (85%)	1 (12.5%)	14 (50%)	0.012
CVC	0	5 (62.5%)	5 (17.9%)	0.000
Vascular malformation	2 (10%)	1 (12.5%)	3 (10.7%)	0.847
Positive family history	5 (25%)	0	5 (17.9%)	0.119
Personal VTE history	1 (5%)	1 (12.5%)	2 (7.1%)	0.486
Immobilization	4 (20%)	7 (87.5%)	11 (39.3%)	0.001
Trauma	2 (10%)	0	2 (7.1%)	0.353
Infection	1 (5%)	6 (75%)	7 (25%)	0.000
Immunomediated disease	4 ^g (20%)	1 (12.5%)	5 (17.9%)	0.640
Congenital Heart disease	0	2 (25%)	2 (7.1%)	0.020
Oncologic disease	0	1 (12.5%)	1 (3.6%)	0.107
Other ^b	1 (5%)	3 (37.5%)	4 (14.3%)	
Severity classification				0.043
Massive	2 (9.5%)	3 (37.5%)	4 (14.3%)	
Submassive	10 (47.6%)	1 (12.5%)	11 (39.3%)	
Non massive	9 (42.8%)	4 (50%)	13 (46.4%)	
Management				
	N=20		N=28	
Anticoagulation	20 (100%)	7 (87.5%)	27 (96.4%)	
Other ^c	4 (20%)	4 (50%)	1 (3.6%)	
Outcomes				
PE Mortality	1 (4.8%)	1 (12.5%)	2 (6.8%)	0.462
All-causes mortality (hospital)	1 (4.8%)	2 (25%)	3 (7.1%)	0.020
All-causes mortality (follow up)	1 (4.8%)	4 (50%)	5 (14.3%)	0.004
Recurrent major thrombosis ^d	2 (9.5%)	2 (25%)	4 (14.3%)	0.306
Other minor complications ^e	3 (14.3%)	0	3 (10.7%)	0.246

Data are n (%), except for p values and unless otherwise indicated. APS indicates antiphospholipid syndrome; CHC, Combined hormonal contraceptives; CVC, Central venous catheter; F, Female; PE, Pulmonary embolism; VTE, Venous thromboembolism.

a) Inherited thrombophilia: n= 1 combined thrombophilia: protein S deficiency and factor V Leiden mutation (heterozygosity); n= 2 protein C deficiencies; n=2 protein S deficiencies; n= 2 prothrombin gene mutations (heterozygosity); b) outpatients: polycystic ovary syndrome; inpatients: hepatic insufficiency; post-varicella infection; polycythemia; c) Other treatment, including surgical thrombectomy, fibrinolysis, need for hemodynamic support (aminergic, ECMO - extracorporeal membrane oxygenation); d) outpatients: recurrent PE; placenta thrombosis with miscarriage. Inpatient: recurrent PE and ischemic stroke, in the same patient; e) Chronic pulmonary atelectasis n=1; post-thrombotic syndrome n=2; f) Excluded one case due to missing data; g) Including 1 recurrency.

Table 2 – Description of three asymptomatic PE

Sex, age	Clinical Context	Diagnosis	PE location/ classification	D-dimer (mcg/mL)	Venous Thrombus	Anticoagulation	Follow-up
F, 15	Cyanotic CCC with PA atresia; status post-bilateral Gleen procedure; secondary erythrocytosis; under ASA 100mg; admitted for diagnostic catheterism	CTPA and V/Q scanning	ISPAT; central bilateral; non-massive	0.22	-	UFH W -> NOAC (chronic)	Chronic PE, deceased
M, 9	IBD agudization; severe liver disease; sepsis; CVC	CTPA	Central unilateral; non-massive	0.52	not-found	LMHW W (6 months)	-
F, 16	Immobilization (cerebral palsy); acute pulmonary infection; 2 weeks post-varicella	CTPA	Subsegmental unilateral; non-massive	-	Extensive VDT, up to the IVC	LMWH W -> NOAC (chronic)	Deceased

D-dimer normal range < 0.5 mcg/mL. ASA indicates Acetylsalicylic acid; CCC, Complex congenital cardiopathy; CTPA, Computed Tomography with Pulmonary Angiography; IBD, inflammatory bowel disease; ISPAT, in situ pulmonary artery thrombosis; LMWH, Low-molecular-weight Heparin; M, Male; NOAC, Non-vitamin K oral anticoagulant; PA, Pulmonary artery; UFH, Unfractionated Heparin; V/Q, Ventilation/ Perfusion and W, warfarin. Other abbreviations are explained in Table 1.

Findings in complementary exams	N (%)
PE Diagnosis	
CTPA ^a	23 (82.1%)
CT with IV contrast	5 (17,9%)
MRI	1 (3,6%)
Thrombi location	
Central	19 (67.9%)
Lobar	4 (14.3%)
Segmental	4 (14.3%)
Subsegmental	1 (3.6%)
Pulmonary infarct	17 (60.7%)
D-dimer assay	
Negative	2 (7.1%)
Positive	23 (82.1%)
Not performed/missing	3 (10.7%)
ECG	
Normal	10 (35.7%)
Sinus tachycardia	9 (32.1%)
T wave inversion	6 (21.4%)
RBBB	3 (10.7%)
Repolarization changes	2 (7.1%)
ECHO	
Intra-cardiac thrombi	2 (7.1%)
Normal	14 (50%)
Right ventricular strain	12 (42.9%)
Pulmonary hypertension	5 (17.9%)
Not performed/missing	5 (17.9%)
Cardiac enzyme	
Elevated	11 (39.3%)
Normal	7 (25%)
Not performed/missing	10 (35.7%)
CUS with Doppler	
Lower limb (DVT ^b /Normal)	12/8 (42.9%/28.6%)
Superior limb DVT ^c	1 (3,6%)
Not performed/missing	7(25%)
CXR	
Normal	10 (35.7%)
Opacity	2 (7.1%)
Not performed/ missing	16
Follow up CTPA	
Normal	10 (35.7%)
Residual thrombi	4 (14.3%)
Minor alterations	3 (10.7%)
PE recurrence	1 (3,6%)

Table 3 – Characterization of complementary exams

CXR indicates chest X-ray; CUS, venous compressive ultrasound; DVT, deep venous thrombosis; ECG, electrocardiogram; ECHO, echocardiogram; MRI, magnetic resonance imaging and RBBB, right bundle branch block. Other abbreviations are explained in Table 1 or 2.

a) one further confirmed by VQ scan (asymptomatic PE); b) Three thrombi extended proximally up to the inferior cava vein; c) CVC related.

Table 4 – Group comparison according to PE severity

	Non-massive (n=13)	Submassive (n=11)	Massive (n=5)	p
Age (years)				0.06
<1	0	0	1 (30%)	
1-9	2 (15.4%)	0	1 (30%)	
>10	11 (84.6%)	11 (100%)	3 (60%)	
Sex (F)	6 (46.2%)	9 (81.8%)	2 (40%)	0.08
Clinical presentation				
Cardiac arrest	0	0	1 (20%)	
Syncope	2 (15.4%)	3 (27.3%)	1 (20%)	0.765
Hypoxemia	5 (38.5%)	4 (36.4%)	5 (100%)	0.067
Tachycardia	3 (23.1%)	10 (90.9%)	5 (100%)	0.005
Number of risk factors			N=4 ^d	0.059
1	0	4 (36.4%)	0	
2	7 (53.8%)	4 (36.4%)	0	
3	4 (30.8%)	1 (9%)	2 (50%)	
4	1 (7.7%)	2 (18.2%)	2 (50%)	
5	1 (7.7%)	0	0	
D-dimer (mcg/mL)			N=4 ^d	0.445
Negative	2 (15.4%)	0	0	
0.5-5	5 (38.5%)	5 (45.5%)	1 (25%)	
5-20	1 (7.7%)	3 (27.3%)	0	
>20	3 (23.1%)	3 (27.3%)	2 (50%)	
Not performed	2 (15.4%)	0	1 (25%)	
Management			N=4 ^d	
Anticoagulation only	12 (92.3%)	8 (72.7%)	0	0.002
Other ^a	1 (7.7%)	3 (27.3%)	4 (100%)	
PICU admission	2 (15.4%)	2 (18.2%)	4 (100%)	0.004
Outcomes				
PE Mortality	0	0	2 (40%)	0.006
All-causes mortality (hospital)	0	0	1 (20%)	0.002
All-causes mortality	2 (15.4%)	0	3 (60%)	0.013
Recurrent major thrombosis ^b	2 (15.4%)	0	2 (40%)	0.049
Minor complications ^c	2 (15.4%)	1 (9%)	0	0.668

PICU – Pediatric Intensive Care Unit; Other abbreviations are explained in Table 1.

a) other treatment, including surgical thrombectomy, fibrinolysis, need for hemodynamic support (aminergic, ECMO - extracorporeal membrane oxygenation); b) non-massive: recurrent PE; placenta thrombosis with miscarriage. Massive: recurrent PE and ischemic stroke, in the same patient; c) non massive: post-thrombotic syndrome n=2; submassive: chronic pulmonary atelectasis n=1; d) Excluded one case due to missing data.