

Supplementary Materials

Supplementary table 1: Clinical characteristics in subgroups of patients with $PVR \leq 6.6 > WU$

		PVR ≤ 6.6 (N=64)	PVR > 6.6 (N=8)
Demographic information	Sex (female)	40 (62.5%)	7 (87.5%)
	Age at diagnosis (years)	61.0 $\pm$ 14.3	66.5 $\pm$ 11.2
	BMI > 30 kg/m ²	17 (37.0%)	0 (0.0%)
Medical history	Previous PEA	3 (4.7%)	0 (0.0%)
	Systemic hypertension	23 (36.5%)	3 (37.5%)
	Diabetes mellitus	5 (7.8%)	1 (12.5%)
	CAD	2 (3.2%)	1 (12.5%)
Clinical parameters	WHO FC III/IV	35 (60.3%)	5 (62.5%)
	6MWD (m)	403 $\pm$ 132	380 $\pm$ 50
	NTproBNP (pg/ml), median [IQR]	168 [99-344]	2,094 [1,338-2,527]
Pulmonary hemodynamics	mRAP (mmHg)	6.6 $\pm$ 4.1	6.5 $\pm$ 3.2
	mPAP (mmHg)	29.7 $\pm$ 8.7	46.9 $\pm$ 7.6
	PAWP (mmHg)	12.0 $\pm$ 5.4	9.1 $\pm$ 3.4
	CO (L/Min)	6.0 $\pm$ 1.6	4.5 $\pm$ 0.9
BPA	mean BPA count	4.6 $\pm$ 1.5	6.6 $\pm$ 1.5
BMI = Body Mass Index; BPA = Balloon Pulmonary Angioplasty; CAD = Coronary Artery Disease; CO = Cardiac Output; DOAC = Direct Oral Anticoagulant; IQR = Interquartile Range; mPAP = mean Pulmonary Arterial Pressure; mRAP = mean Right Atrial Pressure; NTproBNP = N-terminal Fragment of Pro-Brain Natriuretic Peptide; PEA = Pulmonary Endarterectomy; PAWP = Pulmonary Arterial Wedge Pressure; PH = Pulmonary Hypertension; PVR = Pulmonary Vascular Resistance; WHO FC = World Health Organization Functional Class; 6MWD = 6-minute walking distance; Note: Data are given as mean $\pm$ standard deviation or n (%)			

Supplementary table 2. Clinical characteristics of subgroups of patients with mPAP ≤ 45 > mmHg

		mPAP ≤45 (N=69)	mPAP >45 (N=13)
Demographic information	Sex (female)	44 (63.8%)	7 (53.8%)
	Age at diagnosis (years)	61.7 ± 13.5	58.6 ± 16.8
	BMI >30 kg/m ²	18 (35.3%)	3 (23.1%)
Medical history	Previous PEA	3 (4.3%)	1 (7.7%)
	Systemic hypertension	23 (33.8%)	5 (41.7%)
	Diabetes mellitus	8 (11.6%)	0 (0.0%)
	CAD	2 (2.9%)	1 (8.3%)
Clinical parameters	WHO FC III/IV	39 (62.9%)	8 (61.5%)
	6MWD (m)	397 ± 133	380 ± 59
	NTproBNP (pg/ml), median [IQR]	168 [99-344]	2,354 [880-2,450]
Pulmonary hemodynamics	mRAP (mmHg)	6.4 ± 4.0	10.2 ± 6.3
	PAWP (mmHg)	11.8 ± 5.3	11.6 ± 5.2
	CO (L/Min)	5.8 ± 1.7	5.1 ± 1.0
	PVR (WU)	3.2 ± 1.6	8.1 ± 2.3
BPA	mean BPA count	4.6 ± 1.4	6.5 ± 1.7
BMI = Body Mass Index; BPA = Balloon Pulmonary Angioplasty; CAD = Coronary Artery Disease; CO = Cardiac Output; DOAC = Direct Oral Anticoagulant; IQR = Interquartile Range; mPAP = mean Pulmonary Arterial Pressure; mRAP = mean Right Atrial Pressure; NTproBNP = N-terminal Fragment of Pro-Brain Natriuretic Peptide; PEA = Pulmonary Endarterectomy; PAWP = Pulmonary Arterial Wedge Pressure; PH = Pulmonary Hypertension; PVR = Pulmonary Vascular Resistance; WHO FC = World Health Organization Functional Class; 6MWD = 6-minute walking distance. Note: Data are given as mean ± standard deviation or n (%)			

Supplementary table 3. Peri-procedural complications according to PVR status (including missing values for PVR)

	PVR ≤6.6 (N=64)	PVR >6.6 (N=8)	PVR missing(N=15)	p-value ¹
Total BPA count	296	53	77	
Mean BPA count	4.6 ± 1.5	6.6 ± 1.5	5.1 ± 1.6	0.006**
Total number of complications²	33 (11.1%)	12 (22.6%)	14 (18.2%)	0.008**
Patients with complications³	26 (40.6%)	7 (87.5%)	8 (53.3%)	0.031*
Patients with thoracic complications³	17 (26.6%)	5 (62.5%)	5 (33.3%)	0.14
Thoracic complications	20 (6.8%)	9 (17.0%)	9 (11.7%)	0.048*
Hemoptysis during the procedure	10 (3.4%)	8 (15.1%)	6 (7.8%)	0.001**
<i>Mild</i>	10 (3.4%)	4 (7.5%)	5 (6.5%)	0.024*
<i>Moderate</i>	0 (0.0%)	4 (7.5%)	1 (1.3%)	<0.001***
Vascular injury	6 (2.0%)	0 (0.0%)	2 (2.6%)	0.57
<i>Mild</i>	5 (1.7%)	0 (0.0%)	2 (2.6%)	0.53
<i>Moderate</i>	1 (0.3%)	0 (0.0%)	0 (0.0%)	0.84
Lung injury	2 (0.7%)	1 (1.9%)	1 (1.3%)	0.45
<i>Mild</i>	1 (0.3%)	0 (0.0%)	0 (0.0%)	0.84
<i>Moderate</i>	1 (0.3%)	1 (1.9%)	1 (1.3%)	0.21
Other thoracic complications	2 (0.7%)	0 (0.0%)	0 (0.0%)	>0.99
Non-thoracic complications	13 (4.4%)	3 (5.7%)	5 (6.5%)	0.54
Contrast allergy	7 (2.4%)	0 (0.0%)	2 (2.6%)	0.55
Complications associated with RHC	3 (1.0%)	0 (0.0%)	2 (2.6%)	0.33
Contrast nephropathy	0 (0.0%)	0 (0.0%)	1 (1.3%)	
Access site	0 (0.0%)	0 (0.0%)	0 (0.0%)	
Others	3 (1.0%)	3 (5.7%)	0 (0.0%)	0.035*
Abbreviations: BPA = Balloon Pulmonary Angioplasty; PVR = Pulmonary Vascular Resistance; RHC = Right Heart Catheterization; Note: Data are given by mean ± standard deviation or as n (%) of number of BPA treatments				
¹ p <0.05; ** p <0.01; *** p <0.001				
² Three BPA treatments were associated with more than one complication				
³ n (%) of total number of patients				

Supplementary table 4. Peri-procedural complications according to mPAP status (including missing values for mPAP)

	mPAP ≤45 (N=69)	mPAP >45 (N=13)	mPAP missing (N=5)	p-value ¹
Total BPA count	317	85	24	
Mean BPA count	4.6 ± 1.4	6.5 ± 1.7	4.8 ± 0.8	0.003**
Total number of complications²	40 (12.6%)	18 (21.2%)	1 (4.2%)	0.011*
Patients with complications³	30 (43.5%)	10 (76.9%)	1 (20.0%)	0.040*
Patients with thoracic complications³	19 (27.5%)	7 (53.8%)	1 (20.0%)	0.15
Thoracic complications	25 (7.9%)	12 (14.1%)	1 (4.2%)	0.094
Hemoptysis during the procedure	15 (4.7%)	9 (10.6%)	0 (0.0%)	0.045*
<i>Mild</i>	12 (3.8%)	7 (8.2%)	0 (0.0%)	0.14
<i>Moderate</i>	3 (0.9%)	2 (2.4%)	0 (0.0%)	0.14
Vascular injury	6 (1.9%)	1 (1.2%)	4 (4.2%)	0.69
<i>Mild</i>	5 (1.6%)	1 (1.2%)	4 (4.2%)	0.60
<i>Moderate</i>	1 (0.3%)	0 (0.0%)	0 (0.0%)	0.88
Lung injury	3 (0.9%)	1 (1.2%)	0 (0.0%)	0.77
<i>Mild</i>	1 (0.3%)	0 (0.0%)	0 (0.0%)	0.88
<i>Moderate</i>	2 (0.7%)	1 (1.2%)	0 (0.0%)	0.63
Other thoracic complications	1 (0.3%)	1 (1.2%)	0 (0.0%)	0.37
Non-thoracic complications	15 (4.7%)	6 (7.1%)	0 (0.0%)	0.26
Contrast allergy	8 (2.5%)	1 (1.2%)	0 (0.0%)	0.79
Complications associated with RHC	4 (1.2%)	1 (1.2%)	0 (0.0%)	0.82
Contrast nephropathy	0 (0.0%)	1 (1.2%)	0 (0.0%)	
Access site	0 (0.0%)	0 (0.0%)	0 (0.0%)	
Others	3 (0.9%)	3 (3.5%)	0 (0.0%)	0.24
Abbreviations: BPA = Balloon Pulmonary Angioplasty; PVR = Pulmonary Vascular Resistance; RHC = Right Heart Catheterization; Note: Data are given by mean ± standard deviation or as n (%) of number of BPA treatments				
¹ p <0.05; ** p <0.01; *** p <0.001				
² Three BPA treatments were associated with more than one complication				
³ n (%) of total number of patients				