

## Early Results of High-risk pulmonary endarterectomy in patients with splenectomy or indwelling catheters

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Pulmonary endarterectomy (PEA) is the only way to cure chronic thrombo-embolic pulmonary hypertension (CTEPH) by removal of all pulmonary obstruction. Splenectomy, ventriculoatrial shunt, pace maker lead, or chemotherapy catheter port are medical conditions that have been known as risk factors of distal (ie down to segmental arteries) CTEPH. Whether the risk is worth the benefit of PEA in patients with these conditions remained unknown.

Between November 2009 and October 2012, 303 patients underwent PEA for CTEPH in our institution. Decision for CTEPH was based on a multidisciplinary approach involving surgeons, pulmonologists and radiologists. Among them, 21 (6,9%) had an indwelling catheter and 8 (2,6%) a splenectomy.

All data are summarized in the table. There were no significant differences between this “high” risk” group and the remaining patients concerning age, gender, biology (CRP, BNP), hemodynamics, functional status, operative time and Jamieson classification. There was no in hospital mortality in the “high risk” group. However, morbidity rate was high and due to bleeding, pneumonia, mediastinitis).

Management of CTEPH patients in a reference center with a multidisciplinary approach allows good early surgical results regardless the splenectomy and the presence of indwelling intracardiac catheter.

	Splenectomy (n=8)	Indwelling catheter (n=21)	« High Risk » PEA (n=28)	Remaining PEA (n=272)	p
Sex Ratio (F/M)	2/6	10/11	12/17	127/144	-
Age	61.2+-10	61+-16	60.7+-14	61.1+-15	-
CRP (mg/L)	8.5+-9	10.3+-2	10+-9	19.5+-69	-
BNP	200+-145	380+-144	350+-500	299+-789	-
6MWT (m)	299+-131	356+-137	337+-138	383+-112	-
NYHA					
I	0	1	1	2	
II	2	4	6	51	
III	6	12	18	150	
IV	0	4	4	41	
mPAP (mmHg)	39+-10	46+-13	44+-12	44.9+-12	-
CO (L/min)	4.7+-1	4.7+-1.9	4.6+-1.7	4,8+-1.2	-
TPR (dyne.s- 1.cm-5)	688+-285	922+-544	866+-496	812.6+-359	-
Jamieson Classification					
Type 1	0	0	0	25	
Type 2	7	8	15	116	
Type 3	1	11	12	44	
Type 4	0	2	2	12	
Time on CPB	228+-40	245+-51	239+-48	226+-39	-

(min.)					
Aortic cross clamping (min.)	119+-39	109+-26	111+-30	102+-27	-
Cardiac arrest (min.)	29+-7	23+-14	24+-13	29+-13	-
ECMO	0	0	0	13	
Ventilation (day)	4.7+-5	5+-9	5+-8	3+-5	-
PO mPAP (mmHg)	29.7+-8	33+-8	32+-8	31+-9	-
PO RPT (dyne.s-1.cm-5)	384+-200	696+-312	632+-288	560+-340	-
In hospital mortality	0%	0 %	0%	6.6% (18)	
In hospital morbidity	50% (4)	52% (11)	50% (15)	69% (190)	-