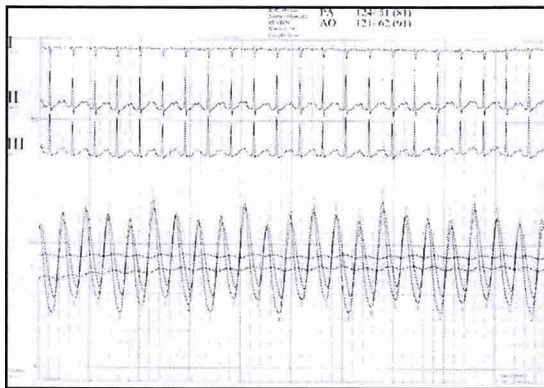


A case report of severe pulmonary hypertension from VSD and PDA

Napa Siriwiwattanakul, MD.*, Tanarat Chun-ngam, MD.*, Worakarn Promphan, MD.**, Rakfan Sawadpanich, MD.***

*Division of Cardiology, Department of Medicine; Rajavithi Hospital. **Division of Pediatric Cardiology, Department of Pediatric; Queen Sirikit Institute National of Health Hospital. ***Division of Cardiovascularthoracic Surgery, Department of Surgery; Rajavithi Hospital. Collage of Medicine, Rangsit university. **THAILAND**

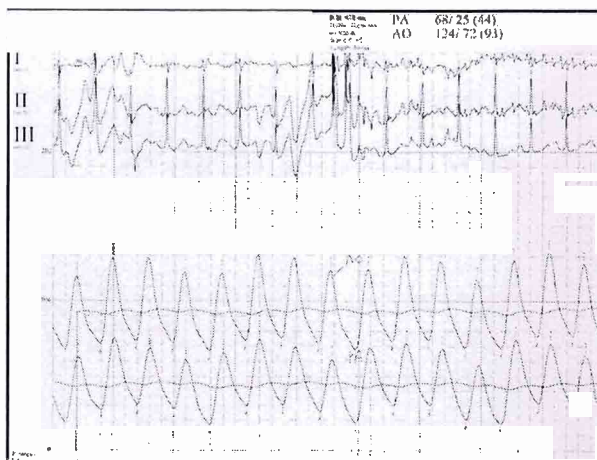
A Thai female 45 years old with underlying congenital heart disease came to Rajavithi Hospital on November 2008 with the symptom of dyspnea, NYHA functional class 3. Previously she was in NYHA functional class 1 and lost follow up 30 years ago because of financial problems. From the physical examination, she had a loud P2, a pansystolic murmur grade 3/6 along the left parasternal border, and a diastolic murmur grade 3/6 at the left parasternal area. The echocardiography showed a large perimembranous VSD and a large main left pulmonary artery. The pulmonary artery systolic pressure (PAP) was estimated to be 70 mmHg. Right heart catheterization was performed and showed a bidirectional shunt from VSD and PDA.



	PULMONARY ARTERY	AORTA
Pressure	124/51 (81)	121/62 (91)
%O2sat	80	84

The PDA was closed with a duct occluder device(size 18/20) to reduce the shunt flow and possibly the pulmonary pressure. Immediately after PDA closure the aortic and pulmonary artery pressures were unchanged. The patient's symptoms improved to NYHA functional class 2 on follow up and sildenafil 20 mg tid was prescribed .

One year later, the follow up right heart catheterization showed a small residual PDA with moderate pulmonary hypertension. (PAP 70% of systemic pressure) and a large inlet perimembranous about 11,2 mm in size with left to right shunt. The results of the pulmonary vascular reactivity are as shown.



	QP/QS	RP/RS	PVR	PA/AO (MMHG)
Room Air	1.88	0.38	9.40	58/80
Iloprost	2.96	0.14	4.89	39/97
100% O2	4.97	0.08	2.90	39/99

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After consultation with the surgeon, the VSD was closed with a Dacron patch and the PDA with closed with a pericardial patch. There were no perioperative complications. The patient is now asymptomatic, NYHA functional class 1 but is still taking sildenafil 20 mg tid. Follow up echocardiography showed a progressive decrease in PAP.

	Severity of pulmonary regurgitation	Estimate PAP(mmHg)
1 month after Operation	moderate	70
6 month after Operation	moderate	60
1 year after Operation	mild	40
1 ½ years after Operation	mild	40

Conclusion: Sildenafil in combination with device closure of a PDA was able to reduce the pulmonary resistance to the point when surgical closure of a VSD is possible in a patient with both a large VSD and PDA