

## 임신중 발견된 원발성 폐고혈압증 1예

황인후 · 최재웅 · 문찬희 · 황의경 · 민현조 · 송창섭

= Abstract =

### A Case of Primary Pulmonary Hypertension Associated with Pregnancy

In Hu Hwang, M.D., Jae Woong Choi, M.D., Eui Kyeong Hwang, M.D.,  
Chan Hee Mun, M.D., Hyun Cho Min, M.D., Chang Sub Song, M.D.

*Department of Cardiology, Nowon Eulji Medical Center, Seoul, Korea*

Primary pulmonary hypertension is a rare, incurable, and progressive clinical entity. When associated with pregnancy, the prognosis of primary pulmonary hypertension is worsened with maternal mortality rates of at least 50%.

The patient was a 29-year-old mother in her 2nd pregnancy, with previous uncomplicated gestation, 5 years ago. She had been well until the 28th week of present gestation when she was admitted because of increasing dyspnea on exertion. She was a housewife with no remarkable family and past histories.

We have experienced a patient with primary pulmonary hypertension in pregnancy. She was treated with an oral calcium-channel blocker and low-molecular-weight heparin and was delivered vaginally with good maternal and fetal outcome.

So we report a case of primary pulmonary hypertension associated with pregnancy and review literature.

**KEY WORDS :** Primary pulmonary hypertension · Pregnancy · Calcium-channel blocker · Low-molecular-weight heparin.

서	론	28
		29
가	2).	1
	50%	
가	3)	증
		례
		: 29 , .
	5	:

가 :  
 :  
 : 29 28  
 , 5  
 가 28  
 : 160/100mmHg,  
 85 , 36.5 20

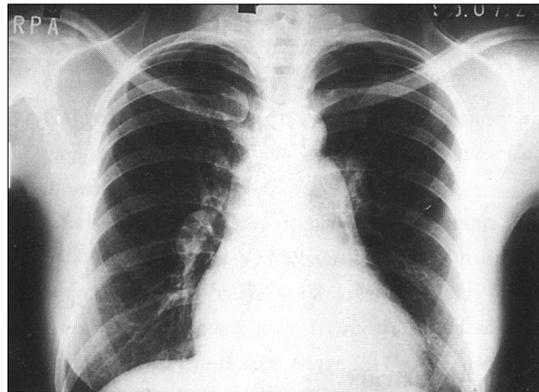


Fig. 1. Chest X-ray shows cardiac enlargement, with dilated pulmonary arteries, normal lung parenchyma and reduced vascularity in distal half of the lung fields.

2  
 ANA,  
 가  
 LE cell, Anti Ds - DNA  
 X -  
 (Fig. 1).  
 (Fig. 2),  
 mmHg (Fig. 3).  
 53

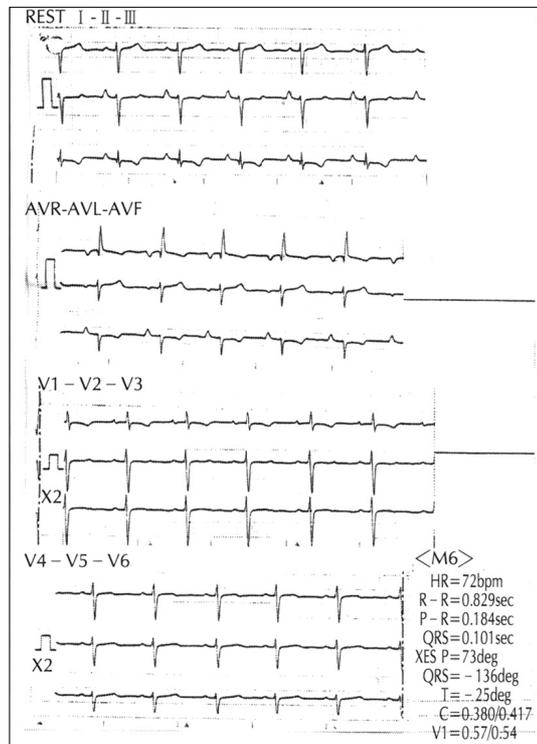
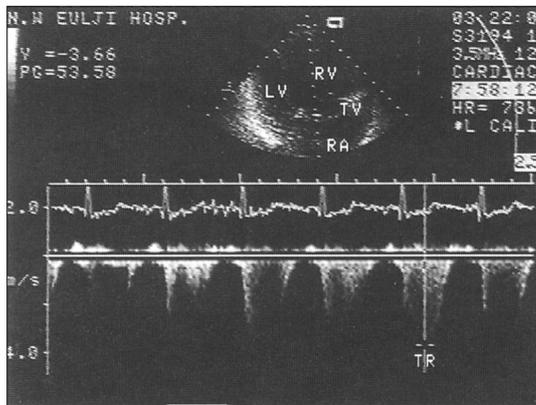


Fig. 2. Electrocardiogram shows sinus rhythm with right ventricular hypertrophy.

Diltiazem 540mg  
 34 93%  
 (perfusion scanning) (Table 1).  
 (Fig. 4), 1 (Fig. 5),  
 52mmHg 1 6 Diltiazem  
 가 8mmHg 540mg

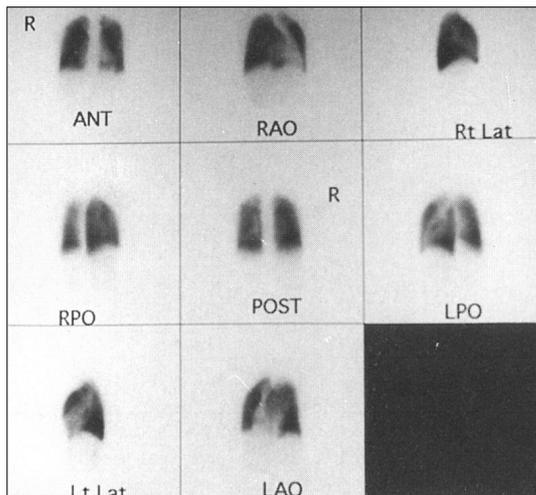
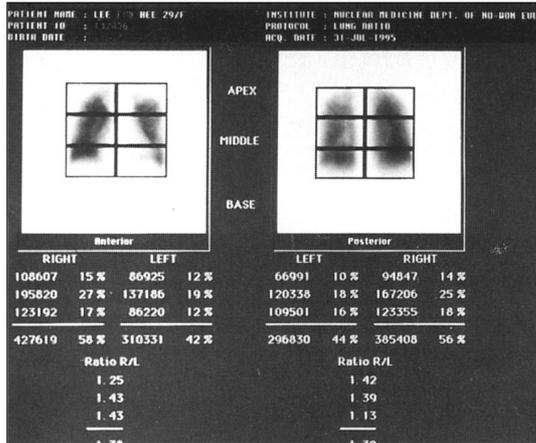


**Fig. 3.** Echocardiography evidenced thickening and dilation of the right ventricle wall, with a decreased ventricle motility and a incompetence of the tricuspid valve.

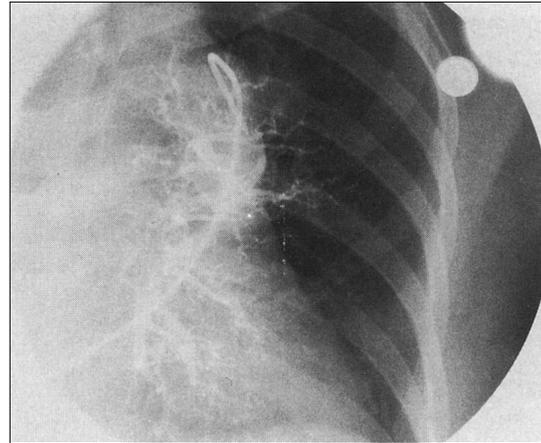
**Table 1.** Cardiac catheterization data

Cather position	O <sub>2</sub> Sat(%)	Pressure(mmHg)		
		Systolic	Diastolic	Mean
SVC	47.0			
IVC	55.9			
RA	high	47.6		
	mid	50.6	5	3
RV	low	49.5		
			53	5
PA	49.8	52	30	38
PCW				8
Aorta	93.5	100	60	74

SVC = superior vena cava; IVC = inferior vena cava; RA = right atrium; RV = right ventricle, PA = pulmonary artery; PCW = pulmonary capillary wedge.



**Fig. 4.** Perfusion scans of the lungs from a variety of angles show normal findings.



**Fig. 5.** Pulmonary arteriogram with tapered peripheral pulmonary arteries.

가  
,  
73mmHg 가  
고 안  
100 1 2 4)  
4.5% 8% 3.5).  
가 1),

가 . 가 . 가

가 , , 가

, Aminorex 가 가 10

<sup>1)</sup> 가 <sup>2,7)</sup> Kiss <sup>2)</sup> 10

, Wagenvoort<sup>5)</sup> 156 가

12 , 50% 가

8 , 2 Breen <sup>8)</sup> 1983 12 8

, 1 , 1 (third trimester) 14

<sup>3)</sup> , Martinez <sup>3)</sup> 5 33 38 가

5 (third trimester) 14

가

가 , 가,

2 3 가

가 , <sup>9)</sup>

<sup>3)</sup> Rich Kaufmann<sup>10)</sup>

Wood<sup>6)</sup> 2.5 3.2 Lewis<sup>4)</sup> 5

가 nifedipine, diltiazem

가 <sup>3)</sup> 20 ade-

, 가 ,

<sup>3)</sup> 가 ,

34 , 가 ,

adenosine 가 , 73mmHg 가

5 10 가 , nifedifine .

Schrader <sup>11)</sup> .

15 ad -

enosine 12 요 약

20% , 3 nifedif -

ine , adenosine , X - ,

12 6 nifedifine , , , , ,

Rubin <sup>12)</sup> 7 , , , , ,

epoprostenol 6 ,

20% , 1

40% 가 . epopr -

ostenol 가 가

가 3 5

가

Rich Kaufmann<sup>10)</sup> 가

가

(venous stasis),

28

Diltiazem 540mg 1 6

가

### References

- 1) 정남식 · 이우형 · 김성순 · 이웅구 차홍도 : 원발성 폐고혈압증 10례에 대한 임상 및 혈액학적고찰. 대한내과학회잡지 23 : 486-491, 1980
- 2) Kiss H, Egarter C, Asseryanis E, Putz D, Kneussl M : Primary pulmonary hypertension in pregnancy : A case report. *Am J Obstet Gynecol* 172 : 1052-1054, 1995
- 3) Martinez JM, Comas C, Sala X, Gratacòs E, Torres PJ, Fortuny A : Maternal primary pulmonary hypertension associated with pregnancy. *European Journal of Obstetrics & Gynecology and Reproductive Biology* 54 : 143-147, 1994
- 4) Lewis J, Rubin, MD : Primary Pulmonary Hypertension. *N Engl J Med* 336 : 111-117, 1997
- 5) Wagenvoort CA, Wagenvoort N : Primary pulmonary hypertension : a pathologic study of lung vessels in 156 clinically diagnosed cases. *Circulation* 42 : 1163-1184, 1970
- 6) Wood P : Primary pulmonary hypertension. *Brit Med J* 2 : 693-699, 1950
- 7) Takeuchi T, Nishii O, Okamura T, Yaginuma T : Primary pulmonary hypertension in pregnancy. *Int J Gynecol Obstet* 26 : 145-149, 1988
- 8) Breen TW, Janzen JA : Pulmonary hypertension and cardiomyopathy : anesthetic management for Caesarean section. *Can J Anesth* 38 : 895-899, 1991
- 9) Rich S, Brundage BH : High-dose calcium channel-blocking therapy for primary pulmonary hypertension : evidence for long-term reduction in pulmonary arterial pressure and regression of right ventricular hypertrophy. *Circulation* 76 : 135-141, 1987
- 10) Rich S, Kaufman L, Levy P : The effects of high doses of calcium-channel blockers on survival in primary pulmonary hypertension. *N Engl J Med* 327 : 76-81, 1992

- 11) Schrader BJ, Inbar S, Kaufmann L, Vestal RE, Rich S : *Comparison of the effects of Adenosine and Nifedipine in Pulmonary hypertension. J Am Coll Cardiol* 19 : 1060-1064, 1992
- 12) Rubin LJ, Groves BM, Reeves JT, Frosolono M, Handel F, Cato AE : *Prostacyclin-induced acute pulmonary vasodilation in primary pulmonary hypertension. Circulation* 66 : 334-338, 1982
- 13) Briggs GG, Freeman RK, Yaffe SJ : *Drugs in pregnancy and lactation. 4th. p410, Baltimore, Williams & Wilkins, 1994*
- 14) Nootens M, Rich S : *Successful Management of Labor and Delivery in Pulmonary Hypertension. Am J Cardiol* 71 : 1124-1125, 1993
- 15) Dresdale DT, Shultz M, Michtom RJ : *Primary pulmonary hypertension : clinical and hemodynamic study. Am J Med* 11 : 686-694, 1951