



14)

69 가 1 가

증 례

: 69 , .

: .

: 10 가

5~10

:

:

140/100 mmHg, 75

20 .

:

13.8 gm/dL,

40.5%, 6600/mm<sup>3</sup>, 220,

000/mm<sup>3</sup> Na 147 mM/L,

K 4.1 mM/L, Cl 106 mM/L, Ca 9.0 mg/dL, P 2.8

mg/dL .

BUN 18 mg/dL, creatinine 1.0

mg/dL, Total protein 7.0 g/dL, Albumin 4.0 g/dL,

ALP 80 U/L, AST 13 U/L, ALT 12 U/L, Total bili -

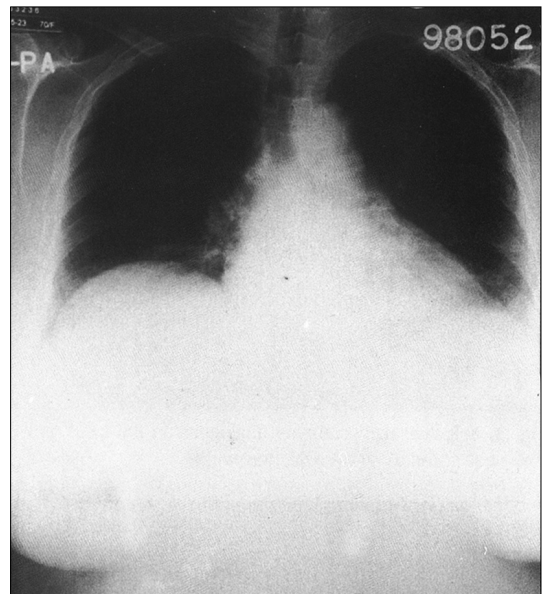
rubin 0.4 mg/dL, Total cholesterol 216 mg/dL

. LDH, CPK 447 U/L, 42 U/L .

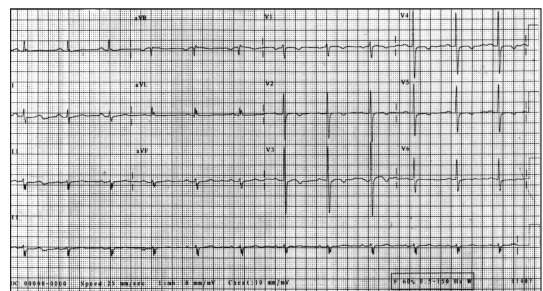
X

(Fig. 1).

ST (Fig. 2).



**Fig. 1.** Plain chest PA. It showed mild cardiomegaly without pulmonary edema, pleural effusion and widened mediastinum.



**Fig. 2.** A 12-lead electrocardiogram on admission. EKG revealed normal sinus rhythm, low voltage in limb leads, and nonspecific ST change.

3

75% .

6

(Figs. 3, 4 and 5).

6

가

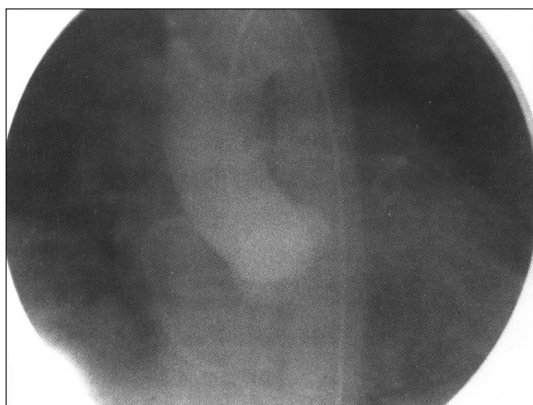
40



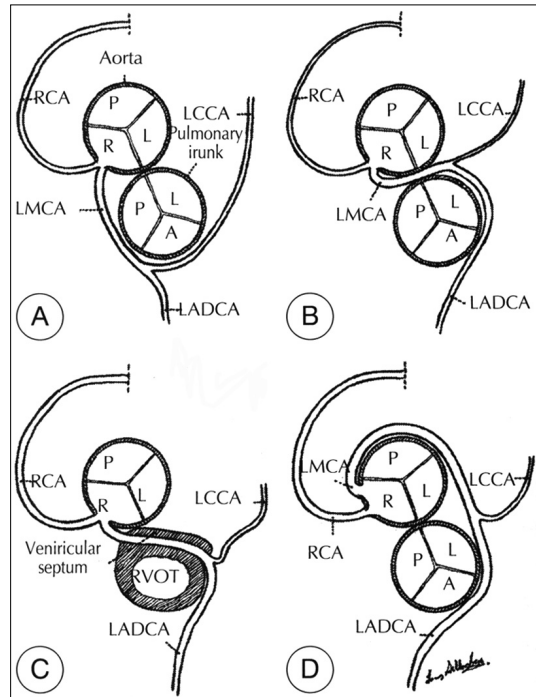
**Fig. 3.** Selective right coronary angiogram in the LAO view. The right coronary artery was normal.



**Fig. 4.** Selective left coronary angiogram in the LAO view. The left coronary artery originated from independent ostium in the right sinus of Valsalva and passed posterior to the aorta.



**Fig. 5.** Aortogram. It showed normal aorta, The right and left coronary arteries originating from the right sinus of Valsalva are demonstrated. The left main coronary artery ran posterior to the aorta.



**Fig. 6.** Diagram showing the 4 subtypes of anomalous origin of the left main coronary artery from the right sinus of Valsalva. A = anterior ; L = left ; LADCA = left anterior descending coronary artery ; LMCA = left main coronary artery ; LCCA = left circumflex coronary artery ; P = posterior ; R = right ; RCA = right coronary artery ; RVOT = right ventricular outflow tract.

32

QRS

고 찰

가

가 .<sup>1)</sup>

Roberts

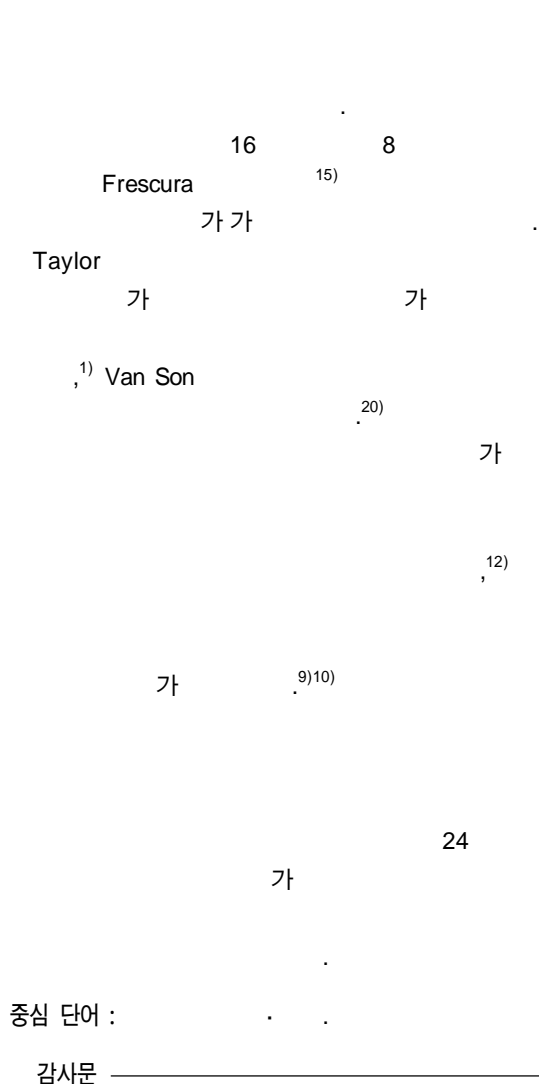
17

4가

(Fig. 6).<sup>3)</sup>

Type A

2 (12%) , Type B  
9 (53%), Type C  
2 (12%), Type Murphy  
4 (23%)  
D  
가  
9 7  
3)  
9)  
Schwarz  
가 , 5 - 7)15)16)  
13 1 가 가  
17)  
4 - 7)14)  
가  
가  
가  
가 1)5 - 8) Kubota 68  
19)  
가 9 - 13)  
Murphy  
12  
가  
9) Schwarz  
torsade de pointes가 40 Schwarz  
10)  
Kimbiris  
가  
가  
Kimbiris가  
4 가 56 , 13)  
Reig 1 42 18)  
가 가  
40  
Schwarz  
1 18)  
10)  
가 가



## REFERENCES

- 1) Taylor AJ, Rogan KM, Virmani R. Sudden cardiac death associated with isolated congenital coronary artery anomalies. *J Am Coll Cardiol* 1992;20:640-7.
- 2) Yamanaka O, Hobbs RE. Coronary artery anomalies in 126,595 patients undergoing coronary angiography. *Cathet Cardiovasc Diagn* 1990;21:28-40.
- 3) Roberts WC, Shirani J. The four subtype of anomalous origin of the left main coronary artery from the right aortic sinus (or from the right coronary artery). *Am J Cardiol* 1992;70:119-21.
- 4) Serota H, Barth CW, Seuc CA, Vandormael M, Aguirre F, Kern MJ. Rapid identification of the course of anomalous coronary arteries in adults: the "dot and eye" method. *Am J Cardiol* 1990;65:891-8.
- 5) Kragel AH, Roberts WC. Anomalous origin of either the right or left main coronary from the aorta with subsequent coursing between aorta and pulmonary trunk: analysis of 32 necropsy cases. *Am J Cardiol* 1988;62:771-7.
- 6) Barth CW, Roberts WC. Left main coronary artery originating from the right sinus of Valsalva and coursing between the aorta and pulmonary trunk. *J Am Coll Cardiol* 1986;7:366-73.
- 7) Roberts WC. Major anomalies of coronary arterial origin seen in adulthood. *Am Heart J* 1986;111:941-63.
- 8) Waller BF. Exercise-related sudden death in young (age less than or equal to 30 years) and old (age greater than 30 years) conditioned subjects. *Cardiovasc Clin* 1985;15:9-73.
- 9) Murphy DA, Roy DL, Sohal M, Chandler BM. Anomalous origin of the left main coronary artery from anterior sinus of Valsalva with myocardial infarction. *J Thorac Cardiovasc Surg* 1978;75:282-5.
- 10) Schwarz ER, Hager PK, Uebis R, Hanrath P, Klues HG. Myocardial ischaemia in a case of a solitary coronary ostium in the right aortic sinus with retroaortic course of the left coronary artery: documentation of the underlying pathophysiological mechanism of ischaemia by intracoronary doppler and pressure measurements. *Heart* 1998;80:307-11.
- 11) Chaitman BR, Lesperance J, Saltiel J, Bourassa MG. Clinical, angiographic, and hemodynamic finding in patients with anomalous origin of the coronary arteries. *Circulation* 1976;53:122-31.
- 12) Kimbiris D, Iskandrian AS, Segal BL, Bemis CE. Anomalous aortic origin of coronary arteries. *Circulation* 1978;58:606-15.
- 13) Kimbiris D. Anomalous origin of the left main coronary artery from the right sinus of Valsalva. *Am J Cardiol* 1985;55:765-9.
- 14) Abouzied AM, Amaram S, Neerukonda SK. Anomalous left coronary artery arising from right sinus of Valsalva could be a minor congenital anomaly: A case report and review of the literature. *Angiology* 1999;50:175-8.
- 15) Frescura C, Basso C, Thiene G, Corrado D, Pennelli T, Angelini A, et al. Anomalous origin of coronary arteries and risk of sudden death: A study based on an autopsy population of congenital heart disease. *Hum Pathol* 1998;29:689-95.
- 16) Lauridson JR. Sudden death and anomalous origin of the coronary arteries from the aorta: A case report and review. *Am J Forensic Med Pathol* 1988;9:236-40.
- 17) Lee KM, Lee MH, Kwon KH, Lee JH, Kwon HM, Cho SY, et al. Acute myocardial infarction as a complication of anomalous left coronary artery origin from right coronary sinus. *The Korean Circulation Journal* 1996;26:901-5.
- 18) Reig J, Jornet A, Petit M. Anomalous left coronary artery originating in the right aortic sinus with retroaortic course: A postmortem study. *Angiology* 1994;45:57-60.
- 19) Kubota Y, Monji T, Nakagawa H, Uwatoko H, Kitamura K. Anomalous origin of the left main coronary artery from the right aortic sinus of Valsalva with vasospastic angina. *Chest* 1991;100:1167-8.
- 20) Van Son JA, Haas GS. Anomalous origin of left main coronary artery from right sinus of Valsalva: modified surgical treatment to avoid neocoronary ostial stenosis. *Eur J Cardiothorac Surg* 1996;10:467-9.