

관상동맥 기형과 동반된 급사 1예

유연표 · 이영경 · 윤현수 · 정경태 · 박순창

Sudden Death Associated with Anomalous Left Coronary Artery Origin from Right Sinus of Valsalva with Posterior Course

Yun Pyo You, MD, Young Koung Lee, MD, Hyeon Soo Yoon, MD, Kyoung Tae Jeong, MD and Soon Chang Park, MD

Department of Internal Medicine, Eul Ji Medical College, Daejeon, Korea

ABSTRACT

The left coronary artery from the right sinus of Valsalva represents an incidence of 0.017% of angiographic series and 1.3% of total coronary anomalies of angiographic series. The anomalous left coronary artery arising from the right sinus of Valsalva may take either a septal, anterior, interarterial or posterior course. Sudden death is thought to result from transient occlusion of anomalous left coronary artery, particularly when the anomalous artery passes between the aorta and the pulmonary trunk. The left coronary artery from the right sinus of Valsalva with posterior course are thought to be benign anomalies, although rarely myocardial ischemia may occur. A 69-year old woman died suddenly at rest. Coronary angiography revealed that anomalous left coronary artery origin from right sinus of Valsalva without any significant stenotic lesion, the anomalous left coronary artery passed posterior to the aorta. We report the patient with anomalous originated left coronary artery and its course posterior to aorta associated with the sudden death. (**Korean Circulation J 2000;30(12):1578-1582**)

KEY WORDS : Anomalous origin of left coronary artery · Sudden death.

서 론

Roberts ³⁾ Serosa ⁴⁾

47가

1%

가

3)

0.017%

1.3%

2)

. 1)

가

: 2000 5 29

: 2001 1 15

: , 301 - 726

24 - 14

: (042) 259 - 1921 · : (042) 000 - 0000

1)5-8)

9-13)

가

14)

69 가 1 가

가

증 례

: 69 , .

:

: 10 가

5~10

:

:

140/100 mmHg, 75

20

:

13.8 gm/dL,

40.5%, 6600/mm³, 220,

000/mm³ 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).

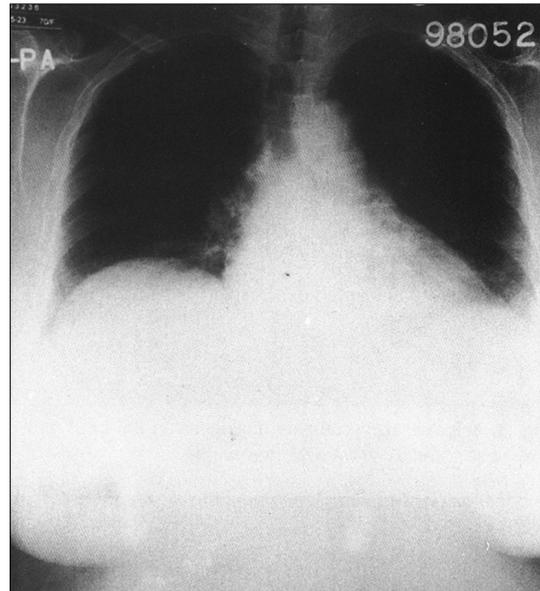


Fig. 1. Plain chest PA. It showed mild cardiomegaly without pulmonary edema, pleural effusion and widened mediastinum.

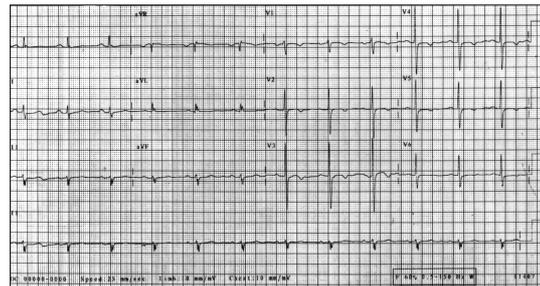


Fig. 2. A 12-lead electrocardiogram on admission. EKG revealed normal sinus rhythm, low voltage in limb leads, and nonspecific ST change.

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.

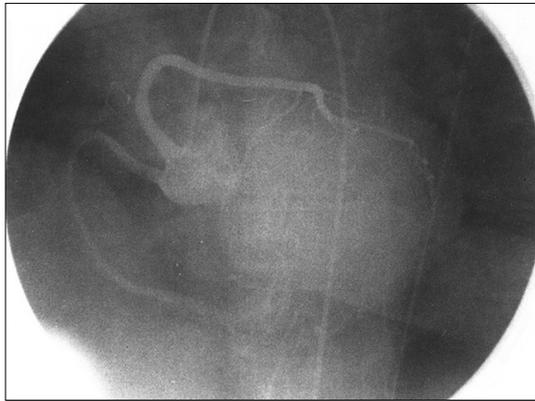


Fig. 4. Selective left coronary angiogram in the LAO view. The left coronary artery originated from independent ostium in the right sinus of Valsalva and passed posterior to the aorta.

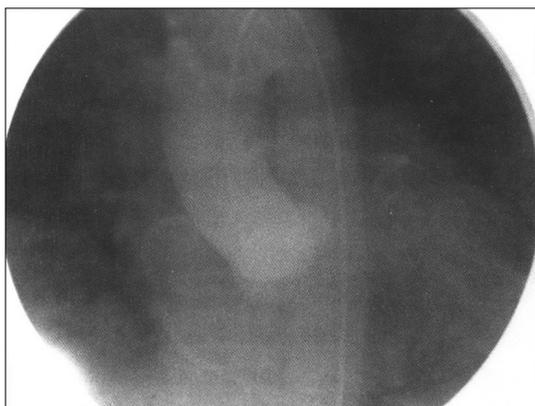


Fig. 5. Aortogram. It showed normal aorta, The right and left coronary arteries originating from the right sinus of Valsalva are demonstrated. The left main coronary artery ran posterior to the aorta.

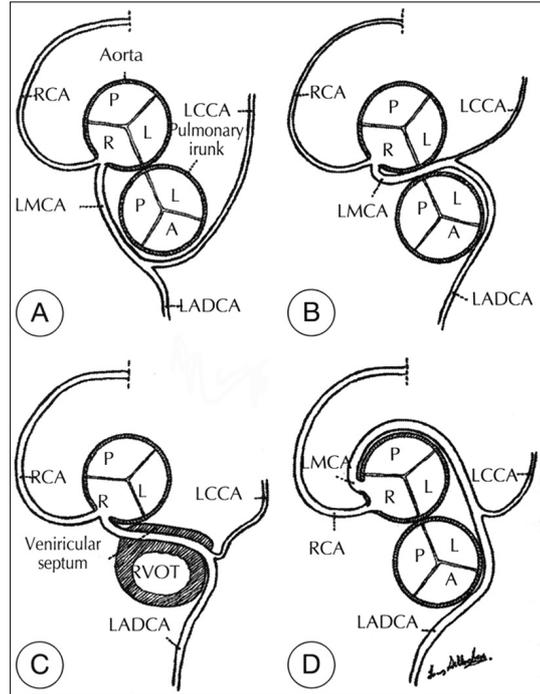


Fig. 6. Diagram showing the 4 subtypes of anomalous origin of the left main coronary artery from the right sinus of Valsalva. A = anterior ; L = left ; LADCA = left anterior descending coronary artery ; LMCA = left main coronary artery ; LCCA = left circumflex coronary artery ; P = posterior ; R = right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

32

QRS

고 찰

가

가 .¹⁾

Roberts

17

4가

(Fig. 6).³⁾

Type A

16 8
 Frescura 가가
 Taylor 가 가
 ,¹⁾ Van Son 가
 ,²⁰⁾ 가
 ,¹²⁾ 가
 가 ,⁹⁾¹⁰⁾ 가
 24 가
 중심 단어 :
 감사문 _____

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 30years) 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.