

갑상선 기능항진증에서 관상동맥 연축에 의한 심근허혈 및 심근손상 1예

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A Case of Myocardial Ischemia and Myocardial Injury Caused by Coronary Vasospasm Associated with Hyperthyroidism

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ABSTRACT

There are many kinds of cardiac complications of hyperthyroidism such as angina pectoris, myocardial infarction, atrial fibrillation, congestive heart failure, heart block and sudden death. While angina is not uncommonly seen in association with hyperthyroidism, it is rare that myocardial ischemia or infarction may be caused by coronary vasospasm. A 46 year-old man, who had been diagnosed with hyperthyroidism at the first admission, presented with chest pain. The serum thyroid hormone was still elevated. Serial ECGs showed significant ST elevation suggesting transmural ischemia, but coronary angiogram did not reveal any significant lesion. ECG at discharge was normalized without evidence of myocardial infarction. We report this case as an example of severe transmural ischemia with myocardial injury caused by coronary spasm associated with hyperthyroidism. (Korean Circulation J 2000;30(3):369-372)

KEY WORDS : Hyperthyroidism · Coronary spasm · Myocardial injury.

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증례

36.1 , 60 / , 24 /

가 (drowsy)

: , 46 .

:

: 2

9 kg

8

10,200/mm³(54%), 14.5 g/dL,

41.9%, 215.000/mm³

127 mg/dL, GOT 26 IU/L,

GPT 49 IU/L, LDH 306 IU/L, 118 mg/dL,

CPK 61 IU/L . 3 GOT 53 IU/L, LDH

401 IU/L, CPK 484 IU/L 가 .

T₃ 2.71 ng/ml, T₄ 17.04 ng/ml, FT4 2.46

: 120/80 mmHg, ng/dL, TSH 0.01 IU/ml an -

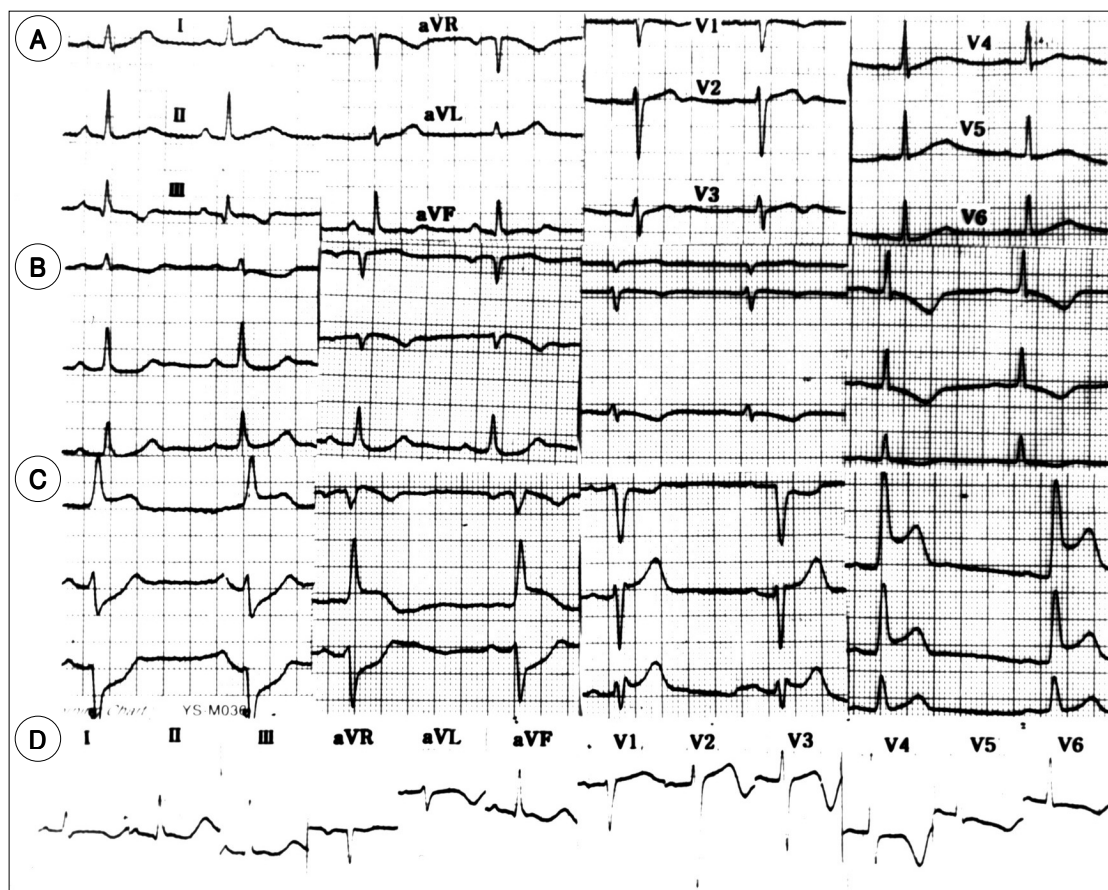


Fig. 1. Serial ECGs. A : During the last admission (8 days ago), normal ECG, B : At the time of admission, sinus bradycardia and anterolateral myocardial ischemia, C : After twenty minutes, ST segment elevation in I, aVL, V₂₋₆ and reciprocal change in II, III, aVF, D : After ten hours, T inversion in lead I, aVL, V₂₋₆.

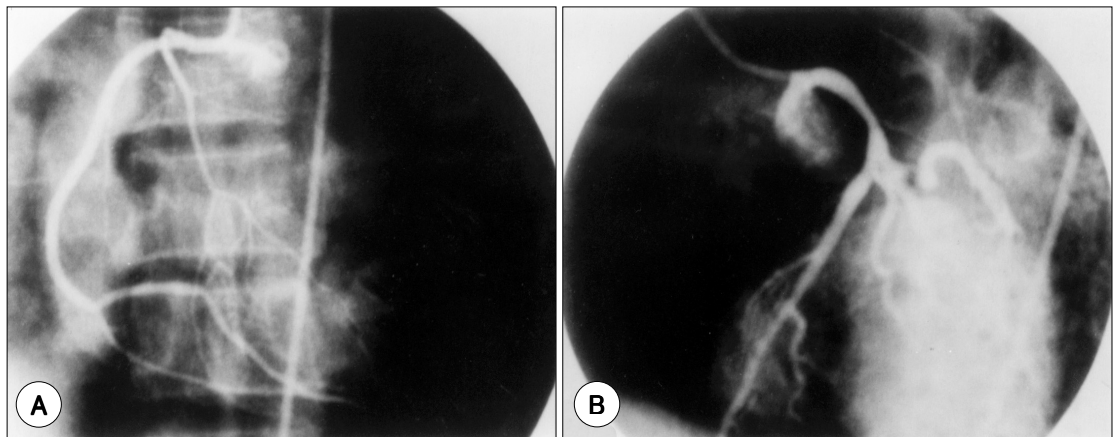


Fig. 2. Coronary angiogram does not show any significant lesions. A : Right coronary artery, B : Left coronary artery.

tithyroglobulin Ab , antimicrosomal Ab anti

TSH - receptor Ab .

: 8

3

20

, aVL, V₂₋₆ ST

, , aVF

고 찰

4

V₄₋₆ ST 10

, aVL, Masani 7)

V₂₋₆ T . 7

(Fig. 1).

:

:

, (Fig. 2).

3)

.

8)

2

: nitroglycerin

9)

(patchy)

4)6)10 - 12)

, ST

가

morphine tPA

100 mg

60/30

mmHg 30 /

13)

propylthiouracil 300 mg, isosorbide

denitrate 40 mg, 100 mg, nitroglycerin

8

14)15)

16)

가 가 가
가 Yasue¹⁷⁾
ams¹⁸⁾ Willi -
가
White¹⁹⁾
Wei⁴⁾ Featherstone¹⁰⁾
가
Nakano¹¹⁾
Molitenio⁶⁾
3
Featherstone 1311
roxine levothy -
가 가
20)

REFERENCES

- 1) Sandler G, Wilson GM. *The nature and prognosis of heart disease in thyrotoxicosis.* *Q J Med* 1959;28:347-69.
- 2) Eracker SA, Wickamasekarein R, Goldman S. *Complete heart block with hyperthyroidism.* *JAMA* 1978;239:1644-6.
- 3) Kotler MN, Michaelides M, Bouchard RJ, Warbasse JR. *Myocardial infarction associated with thyrotoxicosis.* *Arch Intern Med* 1973;132:723-8.
- 4) Wei JY, Genecin A, Greene HL, Achuff SC. *Coronary spasm with ventricular fibrillation during thyrotoxicosis: Response to attaining euthyroid state.* *Am J Cardio* 1979;43:335-9.
- 5) Parker JLW, Lason DH. *Death from thyrotoxicosis.* *Lancet* 1973;2:894-5.
- 6) Molitenio D, Debold CR, Robertson RM. *Case report. Coronary vasospasm-relation to the hyperthyroid state.* *Am J Med* 1992;304:38-42.
- 7) Masani ND, Northridge DB, Hall RJ. *Severe coronary vasospasm associated with hyperthyroidism causing myocardial infarction.* *British Heart J* 1995;74:700-1.
- 8) Resnekov L, Falicov RE. *thyrotoxicosis and lactate-producing angina pectoris with normal coronary arteries.* *Br Heart J* 1077;39:1051-7.
- 9) Gordon JA, Lenkei SC. *Thyrotoxicosis associated with myocardial infarction.* *Can Med Assoc J* 1964;90:1128-9.
- 10) Featherstone HJ, Stewart DK. *Angina in thyrotoxicosis: Thyroid related coronary artery spasm.* *Arch Intern Med* 1983;143:554-5.
- 11) Nakao T, Konishi T, Takezawa H. *Vasospastic angina in thyrotoxicosis-case reports.* *Angiology* 1987;38:717-22.
- 12) Papazoglou N, Kelermenos N, Andriopoulos J, Prionas D. *Vasoplastic angina with hyperthyroidism.* *Heart and lung* 1987;16:437-8.
- 13) Choi DJ, Koh KK, Kim HS, Kim CH, Oh BH, Park YB, et al. *Acute myocardial infarction with normal coronary arteriography.* *Korean Circulation* 1988;18:345-52.
- 14) Park YB, Lee YW. *Coronary artery spasm in patients with coronary artery disease.* *Korean Circulation* 1988;18:161-76.
- 15) Oh BH, On YK, Lim HJ, Kim DW, Sohn DW, Lee MM, et al. *Follow-up provocation test in patients with coronary artery spasm.* *Korean Circulation* 1994;24:205-10.
- 16) Lee SC, Rha SW, Lim DS, Lee EM, Park CG, Kim YH, et al. *Pharmacologically inducible coronary vasospastic changes in patient with ischemic heart disease with normal angiogram or insignificant coronary lesion and its relationships with risk factors.* *Korean Circulation* 1996;6:1152-62.
- 17) Yasue H, Toyama M, Kato H, et al. *Prinzmetal's angina as a manifestation of alpha-adrenergic receptor-mediated coronary artery spasm: Documented by coronary arteriography.* *Am Heart J* 1976;91:148-55.
- 18) Williams RS, Lefkowitz RJ. *Thyroid hormone regulation of alpha-adrenergic receptors: Studies in rat myocardium.* *J Cardiovasc pharmacol* 1979;1:181-9.
- 19) White CW, Zimmerman TJ. *Reduced cholinergic sinus mode restraint in hyperthyroidism.* *Circulation* 1976;54:890-5.
- 20) Yasue H, Omoto S, Takizawa A, et al. *Alkalosis-induced coronary vasoconstriction: Effects of calcium, diltiazem, nitroglycerin, and propranolol.* *Am Heart J* 1981;102:206-9.