경식도 심초음파로 진단된 흉부 둔상후 발생한 유두근 파열 1예

한창엽·김기식·김기영·배장호·강미숙 남명희·김윤년·김권배·최세영*

=Abstract=

A Case of Complete Papillary Muscle Rupture after Blunt Chest Trauma Confirmed by Transesophageal Echocardiography

Chang Yeob Han, M.D., Kee Sik Kim, M.D., Ki Young Kim, M.D., Jang Ho Bae, M.D., Mi Sook Kang, R.N., Myung Hee Nam, R.N., Yoon Nyun Kim, M.D., Kwon Bae Kim, M.D., Sae Young Choi, M.D.*

Thoracic and Cardiovascular Surgery,* Department of Internal Medicine, School of Medicine, Keimyung University, Taegu, Korea

Acute mitral regurgitation associated with rupture of papillary muscle is a rare complication of blunt chest trauma. Echocardiographic information is very useful in the diagnosis of papillary muscle rupture, evaluation of left ventricular function and other abnoramlity of heart. The value of transthoracic echocardiography in blunt chest trauma is limited because patients with severe chest wall injury often have suboptimal echocardiographic fingings. But transesophageal echocardiography can provide high quality images when the transthoracic echocardiographic image quality is poor. We report 27 year-old female with papillary muscle rupture after blunt chest trauma in whom transthoracic echocardiography could not provide a prompt diangosis, but definitive evidence of papillary muscle rupture was demonstrated by transesophageal echocardiography.

KEY WORDS: Traumatic papillary muscle rupture · Transesophageal echocardiography.

서 론 1 · 증 례 : 27 , . 27

14.7g/dl 11,390/mm³, 237,000/mm³ 90/40mmHg 가 pH 7.29, PaCO₂ 41mmHg, PaO₂ 132 , 36.8 53mmHg, HCO₃ 19.2mEq/L, O₂ Saturation 82.9% 28 (Grade 2/6) . CK 300U/L, CK - MB

> 25U/L, LDH 657U/L, Na 147mEq/L, K 4.5mEq/L, Cl 102mEq/L, BUN 20mg/dl, Creatinine 1.0mg/dl, glucose 243mg/dl, AST 756U/L, ALT 349U/L, ALP

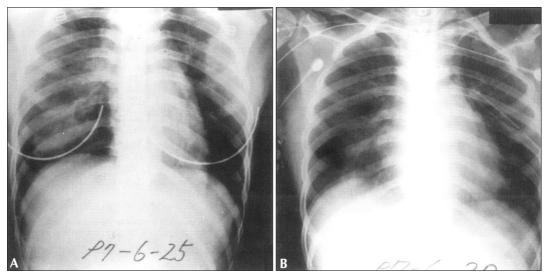


Fig. 1. A: Acute pulmonary congestion on both lung field especially in right without cardiomegaly on admission. B: Chest PA reveals resolved pulmonary congestion after mitral valve replacement.

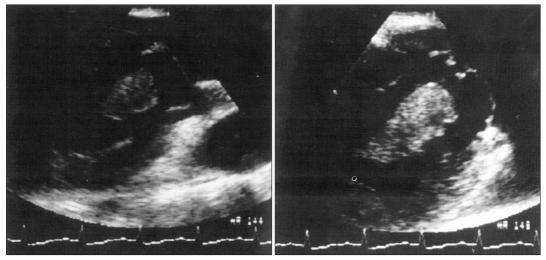
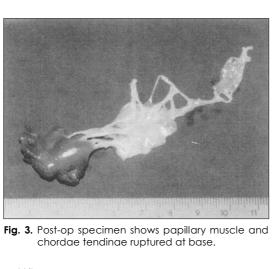


Fig. 2. Transesophageal echocardiogram shows anterolateral papillary muscle(arrow) ruptured at base and floating in left ventricular cavity.



62U/L : : : X (Fig. 1A). : :

, 가 가 가 .

(Fig. 2). , , ,

(Fig. 3) (Fig. 1B). 고 안

가 .

. 가

3).
(contusion), (lace - ration), , , ,
, , , .
Parmley
4) 546
71 24 24

. 24 23 가

1 .

³⁾. , 가

8.9) _.

, , , X , , , , radionuclide cardiac scan,

가 ¹⁾. , , ¹⁰⁾

가 .

1,2)

X , , , , 요 가 . (lung parenchymal contusion)

X 1

•

(shunt) (regurgitant)

11).
(contusion)
フト 3).

가 . (left atrium auricle) ,

^{8,9,12)}. Karalis 105 20

가 11).

가 2,8,9).

가

. 2 7

References

약

- 1) Mattox KL, Limacher MC, Feliciano DV, Colosimo L, O'Meara ME, Beall AC, DeBakey ME: Cardiac evaluation following heart injury. J Trauma 25: 758-765, 1985
- 2) Stoddard MF, Keedy DL, Kupersmith J: Transesophageal echocardiographic diagnosis of papillary muscle rupture complicating acute myocardial infarction. Am Heart J 120: 690-692, 1990
- 3) Braunwald E: Heart disease, A Textbook of cardiovascular medicine 5 th Ed. p1017, Philadelphia, WB Saunders Co, 1997
- 4) Parmley LF, Manion WC, Mattingly TW: Nonpenetrating traumatic injury of the heart. Circulation 18: 371-396, 1958
- 5) 황성오·안무업·임경수·이승환·윤정한·박금수·최경훈·오중환: 흉부 둔상에 의해 유발된유무근파열 1예. 순환기 22:699-704,1992
- 6) 오중환·김호경·이종국·황성오·윤정한·박금수: 좌심실 유두근 파열 3예 보고. 대한흉부외과학회지 25:936-942, 1992
- 기 김혜영·김동운·조명찬·노윤우·이조한·홍종 면·안재호·홍장수·남기병: 비관통성 흉부외상 으로 발생한 좌심실 파열과 전 후 유두근파열 1
 예. 순환기 25: 1064-1068, 1995
- 8) Sakai K, Nakamura K, Hosoda S: Transesophageal echocardiographic findings of papillary muscle rupture. Am J Cardiol 68: 5612-3, 1991
- 9) Patel AM, Miller FA, Khandheria BK, Mullany CJ, Seward JB, Oh JK: Role of transesophageal echocardiography in the diagnosis of papillary muscle rupture secondary to myocardial infarction. Am Heart J 118: 1330-1333, 1989
- 10) Bryant LR, Mobin-Uddin K, Dillon ML, Hinshaw

- MA, Utley JR: Cardiac valve injury with major chest rauma. Arch Surg 107: 279-283, 1973
- 11) Karalis DG, Victor MF, Davis GA, McAllister MPJ, Covalesky VA, Ross JJ, Foley RV, Kerstein MD, Chandrasekaran K: The role of echocardiography in blunt chest trauma: A transthoracic and transesophageal echocardiographic study. J Trauma 36:53-

58, 1994

 12) 강덕현·송재관·임태환·윤권하·송명근·서동 만·이재원·박승정·박성욱·김재중·홍명기· 정상식·이종구: 흉부 대동맥질환의 감별 진단에 서 경식도 심초음파 검사의 유용성. 순환기 25: 787-793, 1995