

흉부둔상환자에서 심근손상의 진단

- 혈중 Troponin T를 기준으로한 심전도, CK-MB/CK비,
심초음파의 비교 -

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= Abstract =

Diagnosis of Myocardial Injury in Blunt Chest Trauma

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Purpose : This study was designed to evaluate diagnostic accuracy of serial electrocardiograms (ECG), myocardial band of creatinine phosphokinase (CK) (CK-MB/CK ratio) and two dimensional echocardiography (ECHO) for myocardial injury in patients with blunt chest trauma.

Methods : We prospectively investigated 54 patients (male : 38, female : 16, mean age : 41) with severe blunt chest trauma. Presence of myocardial injury was determined by increase ($>0.1 \mu\text{g/L}$) of peak serum troponin T (TnT) concentration from serial measurements.

Results : Among 54 patients with blunt chest trauma, 23 patients (43%) had increased peak TnT level which suggested of myocardial injury. Among 23 patients with increased TnT, abnormal ECG findings were found in 18 (78%) and echocardiographic abnormalities were observed in 17 (74%). Cardiovascular events occurred in 9 (39%) of 23 patients with increased TnT. There was no cardiovascular events in patients with normal TnT.

Conclusion : Significant proportion of patients with blunt chest trauma had elevated TnT value which suggested of myocardial injury. We recommend echocardiography and serial tracing of ECG to verify the clinical significance of elevated TnT in patients with blunt chest trauma.

KEY WORDS : Troponin-T · Blunt chest trauma · Myocardial injury.

서 론

가 .

16 76%^{1,2)}

, 가

결 과

54 가
가 38 , 가 16 ,
41 (18 67) .
가 21 (39%),
가 14 (26%), 가 8 (15%),
가 5 (9%), 4 (7%), 가 2
(4%) . injury severity score
(ISS) 15 ± 6 .
38 (70%), 8 (15%) .
TnT가 가 (group 1)가 23
(43%) , TnT 1.35 ± 2.17ug/
L . TnT가 (group 2) 31
(57%) , TnT 0.01 ± 0.
03ug/L .
, , ,
, ISS 가 .
group 1 ,
group 1 가 (Table 1).
, group 1
가 5 (22%), 가 18
(78%) , group 2
가 18 (59%), 가 13 (41%)
. Group 1 ST - T
8 , 2 , 가 6
, 1 , 1 . Group 2

Table 1. Group 1과 group 2의 임상양상 비교

	Group 1(23)	Group 2(31)
()	41.2 ± 14.0	41.3 ± 11.3
(:)	2.1 : 1	2.3 : 1
	4(17%)	4(13%)
	16(70%)	22(71%)
	3(13%)	5(17%)
injury severity score	17.6 ± 5.3	13.5 ± 5.5
(/)*	103 ± 26	83 ± 17
(mmHg)*	103 ± 32	123 ± 16

*p<0.05

ST - T 7 ,
2 , 2 , 가 1
, 1 (Table 2).
Group 1 CK - MB CK 5%
가 5 (22%) , group
2 CK - MB CK 5% 가
1 (3%) .
Group 1 가 6 (26%),
가 17 (74%) , group 2
가 26 (85%),
가 5 (15%) . Group 1
7 , 가 3 ,
2 , 4 ,
1 . Group 2
2 , 1 , 1
, 1 (Table 3).
Group 1 9 (39%) ,
6 , 2 ,
1 . Group 2 2

Table 2. Group 1과 group 2의 심전도 소견 비교

	Group 1(23)	Group 2(31)
	5(22%)	18(59%)
	6(26%)	1(3%)
ST-T	8(35%)	7(23%)
	2(9%)	2(6%)
	1(4%)	1(3%)
	1(4%)	0
	0	2(6%)

Table 3. Group 1과 group 2의 심초음파 소견 비교

	Group 1(23)	Group 2(31)
	6(26%)	26(85%)
	7(30%)	2(6%)
	3(13%)	0
	2(9%)	0
	4(18%)	2(6%)
	1(4%)	0
	0	1(3%)

고 안

²¹⁾

20%

가 ,

¹⁶⁾

. Berk²²⁾

63%

가

가

TnT troponin complex

polype-

, ST -

ptide tropomyosin

가

T

TnT 3가 isotype

,

TnT

TnT

6

11

¹⁷⁾

TnT

TnT

0.5%

,

Blair ²³⁾

가

가

3

TnT

¹⁸⁾

,

3

TnT

(4)

가

가

2 4

(plateau)가

가

14

가

,

3

가

^{19,20)}

²⁴⁾

10

5

TnT

TnT가 가

22%

100%

, TnT가

41%

TnT가

가

TnT가

TnT가 가

가

43%

가

TnT가

2

, CK - MB

(radionuclide scanning)

, CK - MB,

가

가

가

CK - MB가 가

CK - MB 가가 . 가 .

CK (0 3%) CK - MB

, CK가 ,

CK - MB가 가

25) .

CK - MB가

CK - MB가 가 26,27) .

CK -

MB 가

CK - MB

CK CK - MB (CK -

MB/CK) 6,32,33) .

Keller 28) 가

CK - MB/CK 가 54 18

(33%) , CK - MB/CK

가 45 8 (18%)

, Biffi 29)

CK - MB 4)

CK - MB/CK

2.2%²⁸⁾, 3%²⁹⁾, 4%³⁰⁾ 5%³¹⁾ 가 ,

()

CK - MB 6)

CK - MB/CK 가 5%

가

CK - MB/CK

TnT가 1 CK - MB/

CK 가 가 CK - MB 가

CK - MB CK -

MB가

CK - MB

Group 1 74%

Group 2 (5)

TnT troponin I

가

mechanical stunning

가

TnT가 가 , 가

TnT

TnT가 가 , TnT가 가 43%

TnT가 가

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요 약

연구배경 :

방 법 :

54 TnT

TnT가 가 가

, CK - MB/CK ,

결 과 :

TnT 가 23

(43%) . TnT가 가

가 가 5 (22%),

가 18 (78%) , TnT가

가 가 18 (59%),

가 13 (41%) . TnT가

가 CK - MB/CK 가 가

5 (22%) , TnT가

CK - MB/CK 가 가 1

(3%) . TnT가 가

가 6 (26%) ,

가 17 (74%) . TnT가

가 26 (85%)

, 가 5 (15%) . TnT가 가

9 (39%) .

결 론 :

, TnT가 가

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