



Abstract

### Clinical Patterns of Penetrating Torso Injury at Emergency Department

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**Background:** This study was undertaken to evaluate the clinical pattern of the patients with penetrating torso injury. We retrospectively analyzed the clinical symptoms, mechanism of injury, injury type including injured organ, and ultimate outcome of treatment. Our purpose of the study was to establish guideline of management in penetrating torso injury.

**Methods:** This study consists of an analysis of a consecutive series of 94 patients with penetrating injury of trunk treated at one general hospital during 7year period (from January 1995 to April 2003) who was admitted through in our emergency department. All data were collected from the medical records and entered in a database for analysis on the following: age, sex, mechanism of injury, vital sign at admission, clinical outcome including hospital mortality, length of hospital stay, length of intensive care unit stay, requirement of crystalloid fluid and blood product.

**Results:** Among 94 patients, there were 68 men and 26 women, with ages ranging from 19 to 82 years (average 38.2 years). The most frequent mechanism of injury was violence by others including rob (n=54, 57.4%) followed by suicidal attempt (n=24, 25.5%) and accidental injury (n=16, 17.0%). No injury was inflicted from gun. In 37 patients, systolic blood pressure at admission was under 90mmHg. The time interval from injury to admission, and from admission to operation was 57.8minutes and 4hour 12minutes each. Laparotomy was required in 70 patients, thoracotomy in 5 patients, and 3 patients required thoracotomy and laparotomy. Among

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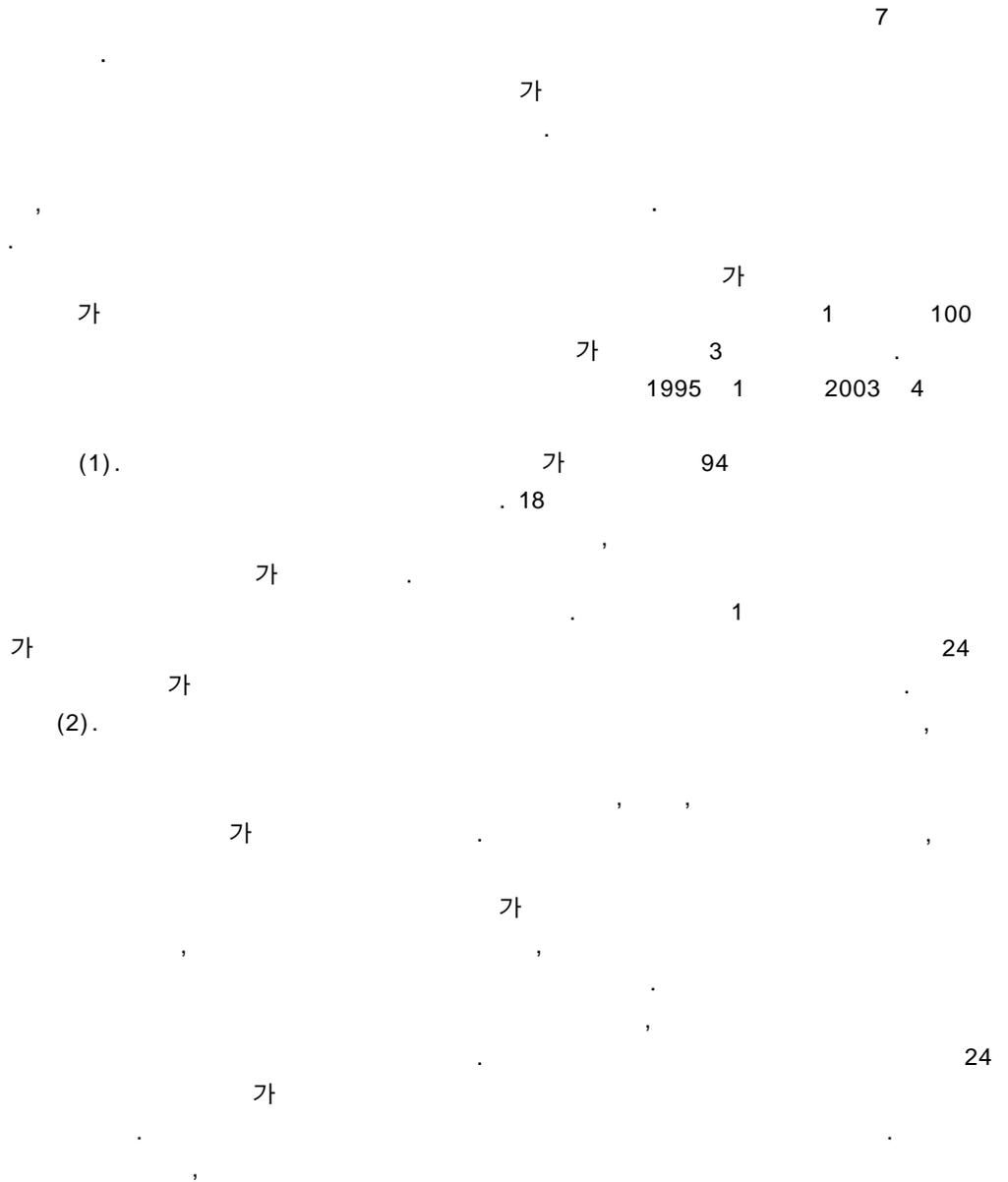
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94 patients, an average of 1.7 organs were injured. The small bowel and colon were the organs most commonly wounded followed by liver, mesentery, pleura. Of the 94 patients, 6 died for an overall mortality rate of 6.4%, and two of them were not related with hemorrhage. The average length of hospital stay was 18.1 days, and 40 patients required ICU care.

**Conclusion:** Of the 94 patients who were admitted from penetrating torso injury, no patient was injured from firearm. Overall mortality rate was 6.4%. In our hospital, firearm injury was relative rare

**Key Words:** Penetrating injury, Thoraco-abdominal trauma



1). 13  
54(57.4%)

1. 가 24 (25.5%), 가 16  
94 가 (17.0%) (Table 2).  
68 , 가 26 6 11  
6.4% 3 3  
(Disseminated  
Intravascular Coagulation) 가 70 가  
(Acute Respiratory Distress) 5  
1 . 38.2±12.0 가 가 (Table 3).  
가  
101.5 ± 32.6 . 94  
mmHg 90 mmHg 161  
37 (39.4%) 1.72  
90 mmHg 47 가  
가 24 , 23  
10 5 35 . 1 3  
57.8 11 (Table 4).  
24 4918 ml가  
5 L  
6 60 . 24  
2 40 가 (Table 가 55  
12.6 unit 가  
. 6 2 4  
24 14,027  
ml, 49 unit  
3 , 4 가  
. 18.1±20.2  
, 11 ,

**Table 1.** General profile of the Patients

Number of Patients	94
Age	38.21 ± 11.99
Time to Hospital (min)	57.8
Time to Surgery	4hr 12min
Number of patients BP 90 mmHg	37

**Table 2.** Mechanism of injury

Mechanism	n	%
Violence		
Rob	13	13.8%
Other person	41	43.6%
Suicidal	24	25.5%
Accidental	16	17.0%

**Table 3.** Types of treatment

Organ	n (%)
Laparotomy	70 (74.5%)
Tube-thoracostomy	15 (16.0%)
Thoracotomy	5 ( 5.3%)
Thoracotomy and laparotomy	3 ( 3.2%)
Angioembolization	1 ( 1.1%)
Total	94

— 18 1 —

138 (Table 5). 1347 (4).

(5) 15 가

34 (6).

(1) 가 가

가 (3). 10%

30% 가 (7,8).

가 11 11.7%

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94 가 1 가

2001 Mandal 가 20 10% 가

23 3049 가

1702 Mandal (4).

가 Mattox 85%

**Table 4. Injured Organ**

Organ	n (%)
Small bowel	26 (16.1%)
Colon	24 (14.9%)
Liver	22 (13.7%)
Mesentery	21 (13.0%)
Pleura	21 (13.0%)
Vessels (including aorta, IVC)	12 ( 7.5%)
Stomach	9 ( 5.6%)
Lung	8 ( 5.0%)
Diaphragm	7 ( 4.3%)
Others (pancreas, kidney, spleen, GB. . .)	11 ( 6.8%)
Total	161

**Table 5. Hospital Course**

Hospital LOS* (day)	18.05 ± 20.18
ICU LOS (N=40#, day)	6.38 ± 8.93
Fluid in 24hrs (ml)	4918.02 ± 2990.21
Blood Product in 24hrs (N=55#,unit)	12.58 ± 15.61
Total	94

\*; Length of Stay

#; Number of patients who needed for ICU admission

&; Number of patients who needed blood product

— : —

(9). Murray 가

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가 가

. 1)

2)

10%가

(16).

3)

가

4)

가

가

5)

6)

(10).

가

가

(Diagnostic

가

Peritoneal Lavage)

(Local Wound Exploration)

(11-13)

가

(14,15).

93

가  
가

94

6

1

(6.41%)

90 mmHg

가

가

Murray

(Emergent Resuscitative

Thoracotomy)

가

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