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= Abstract =

Prehospital Trauma Care System in Seoul by 119 Rescue Services

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Backgroud: Despite continous efforts to improve the prehospital trauma care system in Korea, the preventable death rate has been reported to be high. The purpose of this study was to evaluate the prehospital trauma care system in Seoul by analyzing 119 rescue databases.

Methods: The 119 rescue data bases of 22,275 trauma patients, who were transported to the secondary and tertiary hospital in Seoul by Seoul 119 rescue services from January 1, 2000 to December 31, 2000, were analyzed.

Results: The response time(mean 3.7 min.) showed no time, weekly, and regional variations. However, the transport time from field to hospital showed was high in the morning rush hour(7:00 to 10:00 am), and was gradually decreased and the lowest between 10:00 pm and 7:00 am. There was also a regional variation in the transport time, which was short in the central area and long in the peripheral area of Seoul. Prehospital cares were given to the 10,999 trauma patients(49.4%). Of the 464 unresponsive patients(2%), only 236 patients were identified in transported hospitals. The outcomes of these unresponsive patients were DOA(54%), survival(19%), death in ER(14%), transfer to other hospitals(8%), and death after admission(5%) in order.

Conclusion: We suggest that this study may be helpful to the establishment and improvement of the prehospital trauma care system as well as the determination of the adequate numbers and locations of trauma center in Seoul.

Key Words: Prehospital trauma system, 119 rescue, Response time, Transport time

I.

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1996

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3   , 45

1

[1].

,   ,   ,   ,

40.5%   ,   ,   ,   ,

57.1%   .

[2].   (

,   ),   (

50%   ),   (

.   25%

,   )   .

AVPU   ,

[3].   (unresponsive)

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,   .

III.

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1.

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.   22,275   15,138

(66.4%),   7,658 (33.6%)

II.   2:1   .   44.2   ,

30 , 20 , 40   19.6%,

2000 1 1   2000 12 31   19.5%, 18.0%   , 10

1   6.2%   (1).

21   119

1.

	(%)
9	1,422(6.2)
10-19	1,717(7.5)
20-29	4,456(19.5)
30-39	4,469(19.6)
40-49	4,117(18.0)
50-59	2,586(11.3)
60-69	1,861(8.2)
70-79	1,286(5.6)
80	884(3.9)
	22,275(100)

2.

	(%)
	8,614(37.8)
	1,476(6.5)
	1,940(8.5)
	1,925(8.4)
	221(0.1)
	2,597(11.4)
	455(2.0)
	7.146(31.3)
	2,545(11.2)
	1,136(5.0)
	269(1.2)
	208(1.0)
	2,388(10.5)
	22,275(100)

3.

( )	(%)	( )	(%)
1	2,624(11.5)	12	888(3.9)
2	2,382(10.4)	13	807(3.5)
3	1,753(7.7)	14	775(3.4)
4	1,548(6.8)	15	768(3.4)
5	1,287(5.6)	16	709(3.1)
6	1,156(5.1)	17	688(3.0)
7	1,150(5.0)	18	627(2.8)
8	1,095(4.8)	19	578(2.5)
9	1,005(4.4)	20	531(2.3)
10	1,001(4.4)	21	502(2.2)
11	922(4.0)		

2.

,

37.8% , (31.3%),
(11.2%), (5.0%), (1.2%),
(12.7%) . 8,614
,

30% , (23%),
(22%), (17%) (2).

3. , , ,

21

(11.5%),
(10.4%), (7.7%), (6.8%), (5.6%)
, (2.2%),
(2.3%), (2.5%), (2.8%), (3.0%)
(3). 6
2,121 (9.3%), 5 2,117 (9.3%), 10
2,109 (9.3%) , 12 1,591

(환자수)

총환자수 : 22,796명

1.

(환자수)

월 화 수 목 금 토 일

2.

(%)

발생빈도(%)

3.

(분)

월 화 수 목 금 토 일

도입시간 반응시간 이송시간
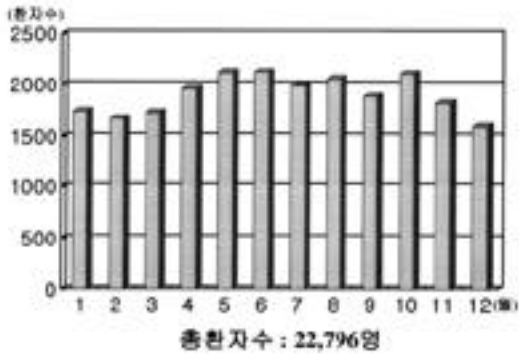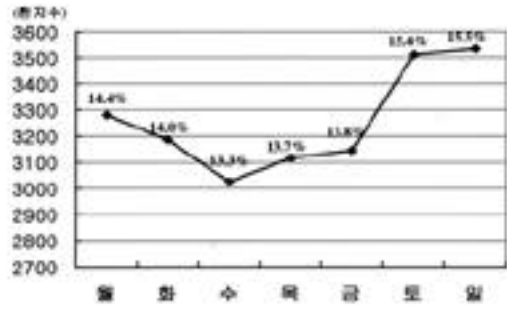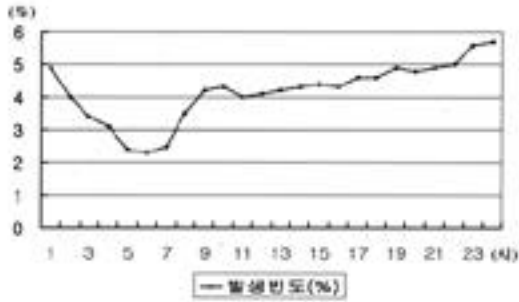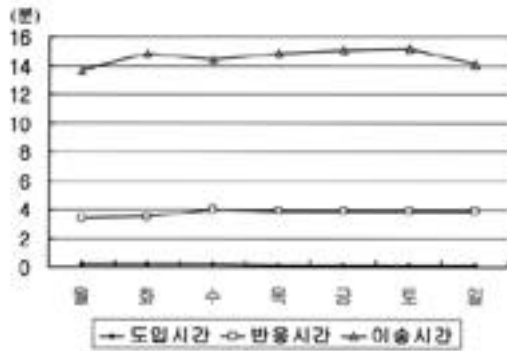
4.   ,   ,

(7.0%), 2   1,670 (7.3%), 1   1,741
(7.6%)   (
1).

15.5%, 15.4%

,   13.3%

(2).   5

(2.4%) 6 (2.3%)   ,

23 (5.6%), 24
(5.7%)   ,
(3).

4.   ,   ,   ,

0.14   ,

3.7 ,

14.6   .

,   0.1~ 0.2

,   3.4~ 4.0

(4.0)   ,   (3.3)

.

(15.1%),   (15.2)   ,

(14.1%),   (13.7)

(4).

그림 5.   ,   ,
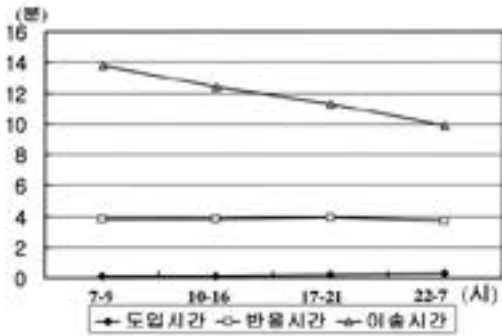
표 5.

	(%)
	2,174(19.8)
	1,749(15.9)
	1,241(11.3)
	1,075(9.8)
	1,035(9.4)
	1,031(9.4)
	825(7.5)
	100(1.1)
Suction	44(0.4)
MAST	7(0.1)
	1,718(15.6)
	10,999(100)

표 4.

( )	( )	( )	( )
1	10.0	12	16.1
2	10.6	12	16.1
3	11.2	12	16.1
4	11.7	15	16.5
5	12.4	16	17.6
6	13.9	17	17.7
7	14.3	18	18.5
8	14.7	19	20.7
9	14.9	20	22.4
10	15.5	21	23.3
11	15.8		

7~ 10 ,   10 ~   5 ,
5 ~   10 ,   10 ~   7
,   (0.1
),   (3.6~ 4.1)   ,
7~ 10   16.9
,
10 ~   7   12.7
(5).

21   ,
(10.0),   (10.6),   (11.7)
,   (23.3),   (22.4),
(20.7)   (4).

5.

A(alert), V(verbal
responsive), P(pain responsive) U(unresponsive)
, A: 18,297 (80.2%), V:
2,893 (12.7%), P: 1,164 (5.1%), U: 464
(2.0%)   .   22,796
10,999 (49.4%)
,   (19.8%),   (15.9%),
(11.3%),   (9.8%),   (9.4%),
(9.4%)   ,   100
(1%)   (5).

6.

. 2001   119

464   (unresponsive)   6 ,

138   326   7 ,   6 ,   6   ,

4 ,   4 ,   5

119

,   72.4%   236   4).   119

.   236

, DOA 126   129   ,   ,

(54%)   ,   44 (19%),   ,

34 (14%),   12 (5%),   119

20 (8%)   .

, 119

IV.

.

2000   119   ,

78,590   1999

,

28,203   1   .

4).   119,

,   ,   ,   129,

5-10).   ,

37.8%   .   39.2%   ,

31.76%   ,   44.7%

,   1999   10).

33.2%   .

1).

12).   13),

11).   119   2.3km ,

,   4.1km,   7.1km   ,

4.2   5   5.2 ,

7,9,10).   7.6   .

,   0.29 5   0.72,

,   ,   ,   0.75   ,

,   ,

.　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　,　　　,

　　　　　　　　　　9.0km/hr 5　　　,　　　　　　　　　　　　　　　　　　.

　　　14.0km/hr,　　　　　45.6km/hr

　　　　　　　　　　　　　,　　　　　　　　　　　　,

　　　　　　　　　　15 , 5　　　　　　　　　,　　　　1

　23 ,　　　　　　　10.5　　　　　　　　.　　,

　　　　　　　　　　　　　　　　　　　　　　　　　　　.

　　　　　　　　　，　　　　　　8)

　　　4.2　　　　　　　　　　.　　　　　　　，

　　　　　　　　2000　　　　　　　　　　　　　　.　　　　9)

　　　1996　　　　　　　　　，

,　　　　　　　　　，　　　　　　　　16

　　　　　　　　　　　　　　　　　　　　,　　　2

.　　　　　　　　　1997

　　　　　5.0 ,　　　　25%　　　　　　　，

　3.2km 119　　　　　　　　　　1　　3%, 1~ 2　3.2%, 2~ 3

　　　　　　　　　3.1%, 3　4.6%　　　.

　　　　　　10).

　　　　　，　　　　　　　　　　.

　　　　　　　　　73.5%

,　　　　　　　　　，　　　26.5%

　　　　119　　　　　　　　　　18.6%

　　　　. 2000

　　　33.58%　　　　　　　　　　　　9).

22.60%　　　　　32.40%　　119

　　　　　，

　　　　22.79,

25.60km/hr 1　　　　　.　　　　　　　0.5%

21.19,　25.08km/hr　　　　　，

11).

　　　，　　　　　75%　DOA

　　.　　　　.　119

　　　　　，

3~ 4km/hr　　　　　，

　119　　　　　　　　　119　，

[14]. 119 [15].

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2 .

2 1 .

119 , 119

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1 100

1 [16],

, , 10

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119

1339 , 2 4

, 2000 7 1339 .

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119 ,

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, 119 .

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. 119 119 ,

1339 ,

.

, 30%

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20

119

off-line ,

PDA

, , 1339

(EMS protocol) .

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129

. , 119

119

50% . 119

129 ,

, ,

50%

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IV.

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2.   :
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