



20 Feet as a Single Criteria for Transporting to the Level 1 Trauma Center. Is It Reasonable?

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Background

20 feet is a single tier 1 criteria for transporting to the level 1 trauma center, in many countries. But we usually met a patient who ground less than 20 feet fall patients have poor prognosis, even dead in ER.

Objective

To identifying relationship between heights of the fall and patient severity, transport patient to appropriate center and receiving suitable care.

Design/Methods

This study was retrospectively conducted in the PNUH trauma center which is level 1 trauma center in Pusan.

We studied patients who visiting PNUH trauma center as fall from heights, from January, 2016 to December 2016. Totally 398 patients was visiting as fall from heights. We exclude 24 pediatric patients, 10 patients as death in the trauma scene and 46 patients as missing records.

So 318 patients was included and analysis was performed with IBM SPSS statistics data editor.

Results

Patients grouped into two: Group 1. Fall from less than 20 feet, Group 2. Fall from more than 20 feet.

Group 1 contained 220 patients, and group2 contained 98 patients. Patents' Injury Severity Score (ISS), medical procedures or surgical operation trials, admittance in the emergency department intensive care unit (ICU) and induced cardiac standstill were studied. Following table shows the result.

Variate	Less than 20 feet (n=220)	More than 20 feet (n=98)	P-value
Age	55.57	48.26	0.07
Sex (M:F)	192:28	71:27	
ISS	23.01	18.32	0.01
Emergency Intervention (including operation)	65.9%	81.6%	0.04
Admit ICU	68.2%	80.6%	0.23
In hospital cardiac arrest (<48hrs)	2.7%	7.1%	0.66

Conclusion

Patients fell from more than 20 feet had higher ISS and went through more frequent surgical operation and it was statistically significant difference.

However, percentage of admittance in ICU, inducing cardiac arrest did not show statistical significance. Patients fell 16 feet high, and 13 feet high had also a statistically significant difference, in ISS.

Therefore, there was controversy that using 20 feet as cut-off value to evaluate trauma patients.

Impact

This study held in single trauma center and evaluated data only 12 months period. According to the result of the study, when patients are transported and treatment protocol was stood, medical team should consider not only heights of the fall but also consider other factors associating with patient's prognosis.