Characteristic of the patients who are hospitalized to Emergency Department Observation Units (EDOUs) in Japan.

Toshiya Mitsunaga, Department of Emergency Medicine, Tokyo Jikei University School of Medicine

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Background

In Japan, transporting elderly patients to emergency departments has recently posed serious problems, including a longer average time from patients' initial emergency calls to their arrival at hospitals. To manage emergency departments more efficiently, many hospitals in the United States and some other developed countries, including Japan, have introduced emergency department observation units (EDOU). However, because the usefulness of EDOUs in managing elderly patients remains uncertain, we analysed data of patients admitted to a Japanese university hospital's EDOU to gauge its efficacy. .

Patients & Methods

We followed 1,426 patients admitted to the hospital's EDOUs from 1 January 2011 to 31 December 2014.

Results

The average age of patients who stayed in the EDOU increased, whereas the average length of time that they spent there decreased. Although the percentage of patients older than 65 years increased slightly, from 36.42% (2011–2012) to 37.73% (2013–2014), the proportion of those patients between the two periods did not significantly change (p = .61). Moreover, their average length of stay was 2.16 ± 0.91 days, whereas patients younger than 65 years stayed for significantly less time (1.92 ± 0.82 days). By condition, approximately 36% of patients older than 65 years presented with non-neurosurgical trauma, approximately 59% presented with other forms of trauma, but proportions of both categories of trauma were significantly smaller in patients younger than 65 years (non-neurosurgical trauma, 23%; all trauma, 47%). Most elderly patients with limb trauma prepped for surgery were transferred to other hospitals after a few days.

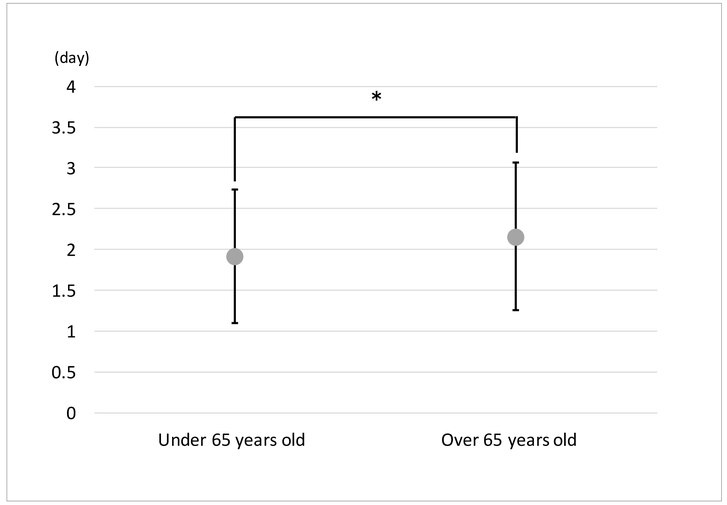

Figure 1: The relationship between age and average length of stay in the EDOUs. Data shown are the mean ± SD. (∗ : p<0.05, Student's t test).

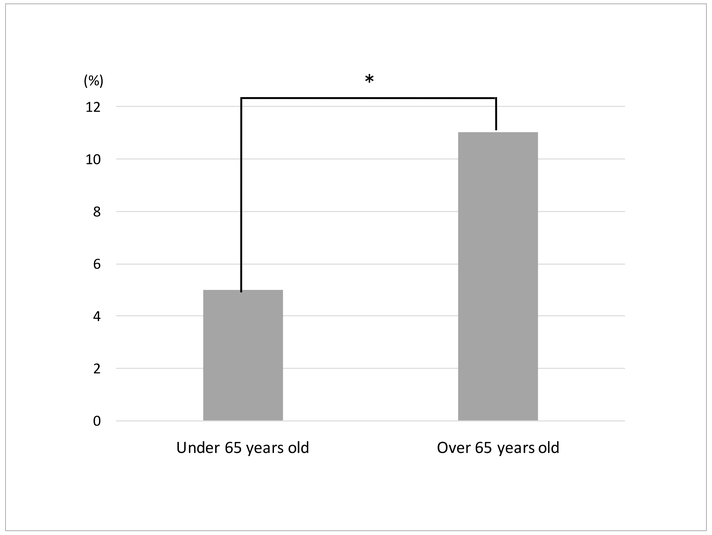

Figure 2: Rate of coexisting medical problems among patients who presented with trauma. We analysed data with a chi-square test . (∗ : p<0.05).

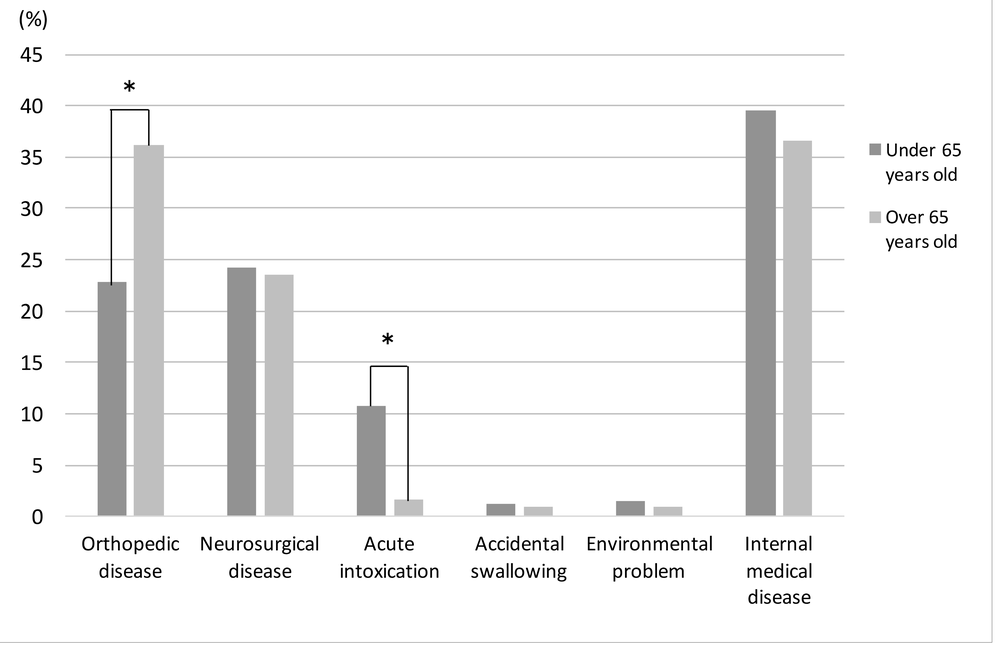

Figure 3: Details of the classification of diseases and injuries among patients admitted to the university hospital's EDOU. We analysed data with a chi-square test . (∗ : p<0.05).

Discussion

In a report by Ogawa et al, it showed that extension factors of the hospitalized length in elderly patients were complications and worsening of other disease. In addition, Yoshida et al reported that they found exacerbation of the original disease in 16% of elderly patients, and in 10.4% of elderly patients complicated with physical complications after hospitalization. In our study, patients over 65 years old who were hospitalized for traumatic disease had many endogenous complications such as pneumonia, urinary tract infections, and arrhythmias at the time of hospitalization. Therefore, it suggests that physical factors may have influenced the hospitalized length of elderly patients. .

Conclusion & perspectives

Results suggest that the EDOU at the university hospital has served to as a buffer for regional emergency medical systems in Japan, especially given the continued ageing of the Japanese population. .