



It is time for a change in the management of elderly severely injured patients! An analysis of 126,015 patients from the TraumaRegister DGU®

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Abstract

Background The number of elderly patients among the severely injured has been increasing continuously. It has been suggested that an increased life expectancy and a higher level of activity and mobility in older ages could explain this observation. Elderly trauma patients have relevant higher mortality rates and poorer functional outcomes. The reasons remain unclear. The aim of this study was to look for differences in the management of severely injured elderly patients compared to younger age groups and to evaluate their potential impact on outcome.

Methods The TraumaRegister DGU® is a multicenter database that documents de-identified data of severely injured patients since 1993. Trauma cases documented between 2009 and 2016 with an ISS ≥ 9 were divided in four age groups. The groups were compared with respect to mechanism of injury, pattern of injury, severity of injury, management and outcome.

Results The analysis of 126,015 severely injured patients showed that 37.5% of the population were elderly patients (≥ 60 years). Their rate actually increased every year by 1.7%. The elderly trauma patients experience different mechanisms of injury (more low energy trauma) and different pattern of injuries (more brain trauma, less abdominal and extremity injuries). Evaluating the management of patients showed that elderly patients have lower intubation rates and less volume replacement in the prehospital setting. Diagnostic interventions like CT scans in the emergency room were performed more restrictively. Elderly trauma patients also received fewer surgical interventions for brain injuries, pelvic fractures and femur fractures. Their hospital mortality rates were higher.

Conclusions Severely injured elderly patients are treated with a more “wait and see approach” resulting in higher mortality rates. We suggest that this population needs a more “aggressive management” to improve their outcome, if the wish to perform complete treatment including surgical procedures and intensive care medicine has not been excluded by the patients or their legal guardian.

Keywords Severely injured elderly · Polytrauma · Management of multiple injured elderly

Introduction

The number of elderly patients among the severely injured has been increasing continuously [18]. It has been suggested that an increased life expectancy and a higher level of activities and mobility in older ages could explain that observation [6, 18]. In 2012, 21% of Germany’s population was older than 65 years of age, by the year 2030 this proportion is estimated to be 29% and by 2060 34%, with the proportion of over 85 years increasing to 9%. Also Germany ranks among the countries with the highest life expectancy (83.3 years for women, 78.6 years for men) [17]. The same coherence is true for other countries. The population age increases globally, the proportion of people aged 65 years and older in Europe is expected to grow to at least 30% by 2050 [16].

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