Med Intensiva. 2017;xxx(xx):xxx–xxx

medicina intensiva

www.elsevier.es/medintensiva

ORIGINAL

Limitation of life-sustaining treatment in severe trauma in the elderly after admission to an intensive care unit☆

Y. Peñasco*, A. González-Castro, J.C. Rodríguez Borregán, M. Ortiz-Lasa, R. Jáuregui Solórzano, M.J. Sánchez Arguiano, P. Escudero Acha

Servicio de Medicina Intensiva, Hospital Universitario Marqués de Valdecilla, Santander, Spain

Received 2 November 2016; accepted 21 March 2017

KEYWORDS
Polytrauma;
Geriatric trauma;
Elderly;
Limitation of life-sustaining treatment

Abstract
Objective: To analyze the factors associated to limitation of life-sustaining treatment (LLST) measures in elderly patients admitted to an intensive care unit (ICU) due to trauma.
Design: A retrospective, descriptive, observational study was carried out.
Setting: ICU.
Patients: A total of 149 patients aged 65 years or older admitted to the ICU due to trauma. Hospital mortality, the decision to limit life-sustaining treatment and the factors associated to these measures were analyzed.
Interventions: None.
Results: The mean patient age was 76.3 ± 6.36 years. The average APACHE II and ISS scores were 15.9 ± 7.4 and 19.6 ± 11.4 points, respectively. LLST was used in 37 patients (24.8%). Factors associated to the use of these measures were patient age (OR 1.16; 95% CI 1.08–1.25), APACHE II score (OR 1.11; 95% CI 1.05–1.67), ISS score (OR 1.03; 95% CI 1.01–1.06), admission due to neurological impairment (OR 19.17; 95% CI 2.33–157.83) and traumatic brain injury (OR 2.89; 95% CI 1.05–7.96).
Conclusions: LLST is frequently established in elderly patients admitted to the ICU due to trauma, and is associated to hospital mortality. Factors associated with the use of these measures are patient age, higher APACHE II and ISS scores, admission due to neurological impairment, and the presence of head injuries.

☆ Please cite this article as: Peñasco Y, González-Castro A, Rodríguez Borregán JC, Ortiz-Lasa M, Jáuregui Solórzano R, Sánchez Arguiano MJ, et al. Limitación del tratamiento de soporte vital en el traumatismo grave en edades avanzadas tras el ingreso en una unidad de cuidados intensivos. Med Intensiva. 2017. http://dx.doi.org/10.1016/j.medin.2017.03.009

* Corresponding author.
E-mail address: metalkender@yahoo.es (Y. Peñasco).

PALABRAS CLAVE
Politraumatismo;
Traumatismo geriátrico;
Ancianos;
Limitación de tratamiento de soporte vital

Limitación del tratamiento de soporte vital en el traumatismo grave en edades avanzadas tras el ingreso en una unidad de cuidados intensivos

Resumen
Objetivo: Analizar los factores asociados al proceso de limitación del tratamiento de soporte vital (LTSV) en los pacientes de edad avanzada que ingresan en una unidad de cuidados intensivos (UCI) tras un traumatismo.
Diseño: Estudio observacional, descriptivo, retrospectivo.
Ámbito: UCI.
Pacientes: Ciento cuarenta y nueve pacientes con una edad igual o mayor de 65 años ingresados en UCI tras un traumatismo. Se analizó la mortalidad intrahospitalaria, la decisión de LTSV y los factores asociados a dicho proceso.
Intervenciones: Ninguna.
Resultados: La edad media fue de 76,3 ± 6,36 años. La puntuación media en la escala APACHE II fue de 15,9 ± 7,4 puntos, y en la escala ISS, de 19,6 ± 11,4 puntos. Se decidió LTSV en 37 pacientes (24,8%). Los factores asociados a este proceso fueron la edad (OR 1,16; IC 95% 1,08-1,25), la puntuación en el APACHE II (OR 1,11; IC 95%1,05-1,67), la puntuación en el ISS (OR 1,03; IC 95% 1,01-1,06), el ingreso como consecuencia de un deterioro neurológico (OR 19,17; IC 95% 2,33-157,83) y el traumatismo craneoencefálico (OR 2,89; IC 95% 1,05-7,96).
Conclusiones: La LTSV se establece con frecuencia en los pacientes de edad avanzada que ingresan en la UCI tras un traumatismo, y se asocia con la mortalidad intrahospitalaria. Los factores asociados al proceso de LTSV son una mayor edad, una mayor puntuación en las escalas APACHE II e ISS, el ingreso como consecuencia de un deterioro neurológico y la presencia de traumatismo craneoencefálico.

Introduction

Socio-sanitary advances have been associated with increased numbers of elderly populations with high functional independence, and physical activity.[1,2] In a parallel way, during the last year we have been able to see an increased number of traumas in this population.[2–4] Compared to younger populations, in the elderly, traumas are associated with more serious clinical conditions, higher mortality rates, and worse prognosis when it comes to morbidity and further disability.[2,5,6] However, the intensive management of these patients may improve prognosis.[7,8]

On the other hand, the decision-making process on the limitation of life-sustaining treatment (LLST) should be aimed at avoiding situations of suffering in cases where treatment is considered potentially inadequate.[9–13]

The elderly have a series of characteristics that distinguish them from younger populations such as physiological changes associated to aging, higher comorbidities, the use of chronic medications, reduced functional reserves, and lower responses to stressful situations – all factors associated with higher mortality rates.[4,14,15] These same characteristics make it necessary to perform detailed assessments of the use of intensive therapies in an attempt to avoid therapeutic cruelty in these patients, since the LLST needs to take into consideration the patient's capacity of recovery with a quality of life adjusted to the expectations of every individiual.[11,16] However, few studies have been focused on the study of LLST in elderly patients who suffer from severe trauma.[17]

This is why the decision-making process in the setting of intensive medicine and critically-ill patients is hard for reasons of urgency, contextuality, and uncertainty surrounding the prognosis on admission.[10,11] For this reason, it is possible that many decisions that have to do with the use of a series of intensive measures are delayed until achieving one diagnostic process that allows us to make the appropriate decisions.[11,18]

One of these scenarios is the management of critically-ill elderly patients who have suffered from a severe trauma. However, to date, no study has ever described in a specific way the situations associated with LLST once this type of patients are admitted to intensive care units (ICUs). For this reason we think it is necessary to review the factors that may have some correlation with the use of these measures and the description of the type of limitations being established. The goal of this study is to determine the factors associated with the LLST process in elderly patients admitted to ICUs after suffering from traumas.

Patients and method

Restrospective, descriptive, observational study conducted in a tertiary-hospital ICU. All patients ≥65 years old who needed admission to the ICU as a consequence of a trauma were included from September 2011 until August 2016.