32604-Answering Reviews

The authors wish to thank the editor and reviewers for their positive and constructive comments. We believe that the quality of our manuscript has improved following their recommendations. Please, note that some references have been modified to include its official final citation.

Reviewer 00742054

This is an important area of research and the article presents interesting findings. However, there are several issues with the way the article has been written that need to be addressed:

Introduction: - Paragraph 2, line 3: "…. Some questions remain unresolved". What are these unresolved questions? Do you mean the reason for a 6-fold increase in geriatric trauma is unknown? Or anything else? Please clarify

We meant that "the optimal management of these patients remains to be determined". We have changed it in the introduction section

Para 3, line 4: the authors have used "low-energy mechanisms" or "high-energy mechanisms" throughout the article. Since these refer to the energy of trauma, I think it will be easier to read and understand if throughout the manuscript you change them to "low-energy traumas" and "high-energy traumas", where appropriate.

We have changed it throughout the text

Page 6, "Skeletal: these patients usually present osteoporosis, leading to secondary fractures even in low-energy mechanisms". This is a 'one-sentence paragraph' that is not acceptable in a paper. I suggest the authors add more information, for example, how this risk increases with the increases of age or what is the rate of osteoporosis, fractures comparing 65-75-year-old people and >75-year-old ones.

We have expanded this paragraph. Now it reads as follows:

Skeletal: these patients usually present osteoporosis [1]. Osteoporosis and tendency to fall increase the incidence of hip fractures, which is the most common cause of traumatic injury in elderly patients, mainly in women [4]. Aging bones are more easily fractured with minor trauma [10].

"Mechanisms of injury", para 3, line 3: "Geriatric patients are more likely to present severe injuries at low speed and have a doubled mortality rate than younger counterparts". The sentence is a bit vague. Do you mean "…severe injuries caused by low speed vehicles"? please clarify.

Yes, the reviewer is right and we have changed it accordingly

Page 7, "Blunt vs. penetrating trauma:…" This is a 'one-sentence paragraph' that is not acceptable. Please add more relevant information.

We have added a new sentence. Now it reads as follows:

Blunt vs. penetrating trauma: Elderly patients usually undergone blunt rather than penetrating trauma, which accounts for less than 5% of the cases [7,17]. Most of the cases of penetrating trauma rely on self-inflicted injuries mediated by chronic illness and depression.

Page 9, para 1, line 3: What do you mean by "unconscious age bias". Please clarify.

This is a common term in the literature, used when the first medical attention received by the patients is influenced by advanced age itself. It was found to be a determinant factor in those cases that were not transferred to trauma centers in the study by *Chang DC, Bass RR, Cornwell EE, Mackenzie EJ. Undertriage of elderly trauma patients to state-designated trauma centers. Arch Surg. 2008; 143: 776-781; discussion 782.* Therefore, we have made no modifications

Page 9, para 1, line 10: the authors have written "To solve this issue, different authors suggested advanced age….". it is not clear which 'issue' it refers to. This sentence comes after the sentence ("Geriatric patients have a decreased mortality if they are transferred to trauma centers with a high volume of elderly trauma patients") that does not seem to be an issue. Please clarify what are the issue. Or, you may need to move it to somewhere else or reword it for clarity.

The reviewer is again right. We have changed "this issue" by "under-triage".

Page 13, para 2: "Interventions to reduce frailty in the community are required and ….". Since this is a review article, the readers may want to find out about the implication of the findings from this review into practice. It will be more beneficial to the readers if the authors list potential or available interventions that can help reduce the rate/risk of fracture in elderlies in the community.

We have added the following sentence from the article cited "Effective interventions included exercise, nutrition, cognitive training, geriatric assessment and management and prehabilitation [68]."

Reviewer 2445329

In this Mn the authors elaborately evaluated the trauma in older adults. The MN is well written and highly didactic, but need a couple of minor revisions; 1. The term "Elderly patients" should be preferred instead of "Geriatric Patients", since Elderly patients is more common. 2. I think that the authors should be mentioned about "Ageism" in the management of the elderly trauma patients in the MN.

We have changed "Geriatric patients" to "Elderly patients" throughout the manuscript and added elderly patients as a new keyword

With regard to ageism, the following sentence has been added in the under-triage section "Taking into consideration the evidence available, under-triaging of elderly trauma patients can be considered as a form of ageism."

Reviewer 3518851

A very good review of the current situation regarding the increasing case load of geriatric trauma on all major trauma centres across the developed world. The review of physiology changes and poorly prognostic injuries was also good. One recommendation would be for a more expanded discussion of the various forms of frailty assessment questionnaires eg the Edmonton Frail Scale and the strengths and weaknesses of each. As Frailty assessment will be the key for ongoing management of the increasing cohort of patients.

We have added the following paragraph with 2 new references

The Edmonton frail scale, which has a great interest in the general population, has not been extensively evaluated in elderly trauma patients except in postoperative state after hip fracture [61]. More interest raised other markers of frailty, such as sarcopenia and osteopenia, that were found to be associated with 1-year mortality in elderly trauma patients [62].

61. **Kua J**, Ramason R, Rajamoney G, Chong MS. Which frailty measure is a good predictor of early post-operative complications in elderly hip fracture patients? Arch Orthop Trauma Surg. 2016;**136**:639-647 [PMID: 26980097 DOI: 10.1007/s00402-016-2435-7]

62. **Kaplan SJ**, Pham TN, Arbabi S, Gross JA, Damodarasamy M, Bentov I, Taitsman LA, Mitchell SH, Reed MJ. Association of Radiologic Indicators of Frailty With 1-Year Mortality in Older Trauma Patients: Opportunistic Screening for Sarcopenia and Osteopenia. JAMA Surg. 2017; **152**:e164604 [PMID: 28030710 DOI: 10.1001/jamasurg.2016.4604]

Reviewer 733845

Only as a personal or a private question: When an old patient with trauma deceases, how do you enroll or record (ICD-code) the cause of death: specific trauma, or what is direct cause of death - multiorgan failure, cardiac or respiratory arrest? Statistically, such death is elaborated according to the code respectively, thus having cardiac or respiratory failure as a leading cause of death in a certain determined population. If it is possible, I would like the answer: zlovric@kbd.hr

As requested, this request has been responded in a private form.

Juan Antonio Llompart-Pou

March 3rd,, 2017