Trends and Outcomes of Alcoholic Intoxication in Trauma Patients

Zhobin Moghadamyeghaneh MD, Katherine E. Kopatsis, Anthony P. Kopatsis, Murwarid Rahimi, Catherine Cuervo, Sittha P. Cheerasarn, Anthony Kopatsis MD

Department of Surgery, Icahn School of Medicine at Mount Sinai – Elmhurst / New York

INTRODUCTION

Alcohol usage has shown to be one of the main risk factors for morbidity and mortality in relation to both intentional and unintentional injury. It is critical to study intoxicated trauma patients to understand the trends and creative preventive strategies. Recent literatures reported an increase in alcohol abuse for women and older adults during the last decade. Using data from the past decade, we investigated the rates and trends of alcohol intoxication in intoxicated trauma patients in different ages and sexes

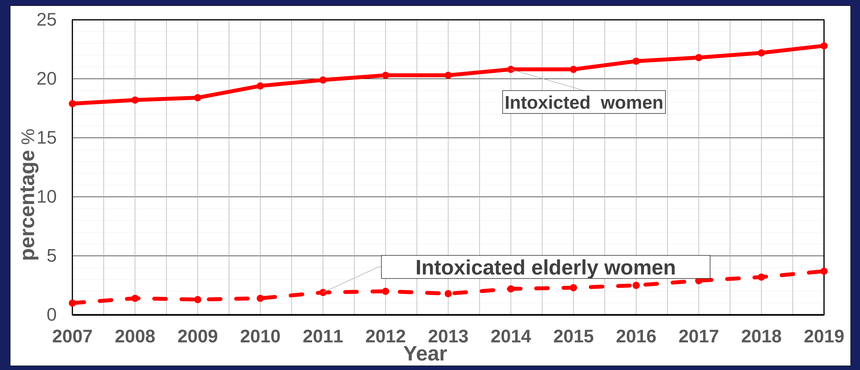
METHODS

- A retrospective review of the TQP database was performed for alcohol intoxicated trauma patients admitted to level I-III trauma centers during 2007-2019.
- 20 patient characteristics and clinical factors were examined.
- Multivariate regression analysis was used to compare alcohol intoxication in different sexes and age groups.

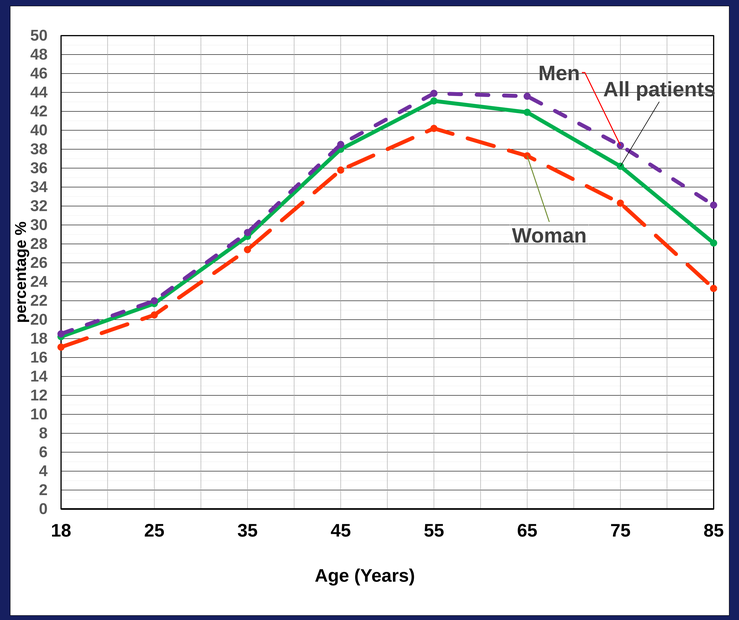
RESULTS

- A total of 1,000,578 intoxicated trauma patients admitted to level I-III trauma centers during 2007-2019 were identified.
- Overall, 21.7% of intoxicated patients were women. The rate of intoxicated women increased significantly from 20.6% in 2007 to 33% in 2019. Intoxicated women have a significantly higher rate of self-inflicted trauma compared to intoxicated men (10.4% vs. 2.4%, P<0.01).

Trends in rate of intoxicated trauma patients by sex during 2007-2019



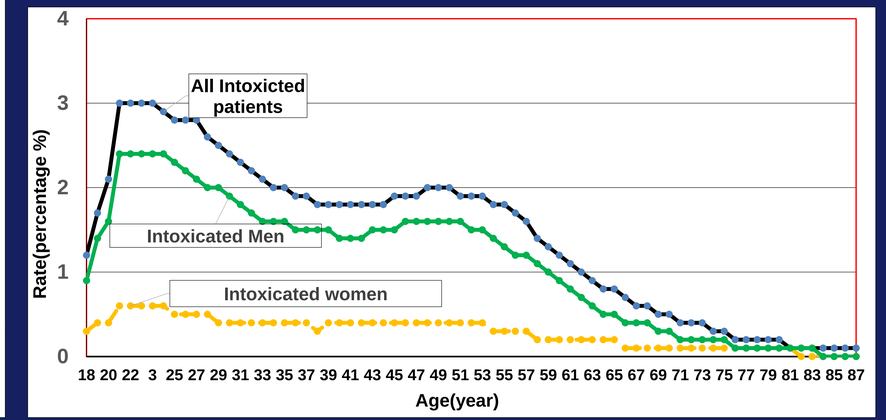
Trends in rate of chronic alcohol abuse for intoxicated trauma patients by age and sex



Trends in rate of self-inflicted trauma in alcohol intoxicated patients by age and sex



Trends in rate of intoxicated trauma patients by age



RESULTS (CONTINUED)

- Overall, 29.7% of intoxicated trauma patients had chronic alcohol abuse and the rate increased by age. Chronic alcohol abuse was higher in men (30.1% vs. 28.2%, OR: 1.09, CI:1.08-1.10, P<0.01) and elderly patients (age≥65) (39.8% vs. 28.9%, OR:1.62, CI: 1.60-1.65, P<0.01).
- Overall mortality for intoxicated trauma patients was 2.8%. Mortality of intoxicated men was higher than women (2.9% vs. 2.2%, OR: 1.32, CI: 1.28-1.37, P<0.01). Elderly intoxicated patients (age≥65) had a significantly higher mortality (4.9% vs. 2.6%, OR: 1.91, CI: 1.84-1.98, P<0.01). Also, elderly men had twice higher mortality risk compared to elderly women (5.7% vs. 3%, OR: 1.96, CI: 1.80-2.14).

CONCLUSION

- There is a gradual increase in the rate of alcoholic intoxication in women with trauma during 2007-2019.
- Approximately one third of intoxicated patients have chronic alcoholic abuse and the rate increases by age.
- Intoxicated women have a significantly higher rate of self-inflicted trauma compared to intoxicated men.
- Elderly patients with alcoholic intoxication have higher mortality, especially elderly men.
- Further studies are needed to investigate preventive strategies for the increasing rate of alcoholic intoxication in women.