

Ketamine administration in prehospital combat injured patients with TBI: a 10 year report of survival

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Background

- Tactical Combat Casualty Care (TCCC) guidelines recommend ketamine for moderate to severe pain in casualties in or in danger of developing shock or respiratory distress
- TCCC guidelines note ketamine may worsen severe TBI despite recent studies failing to support the association.

Objective

To evaluate the survival outcomes of casualties with a head injury in ketamine and non-ketamine recipients

Methods

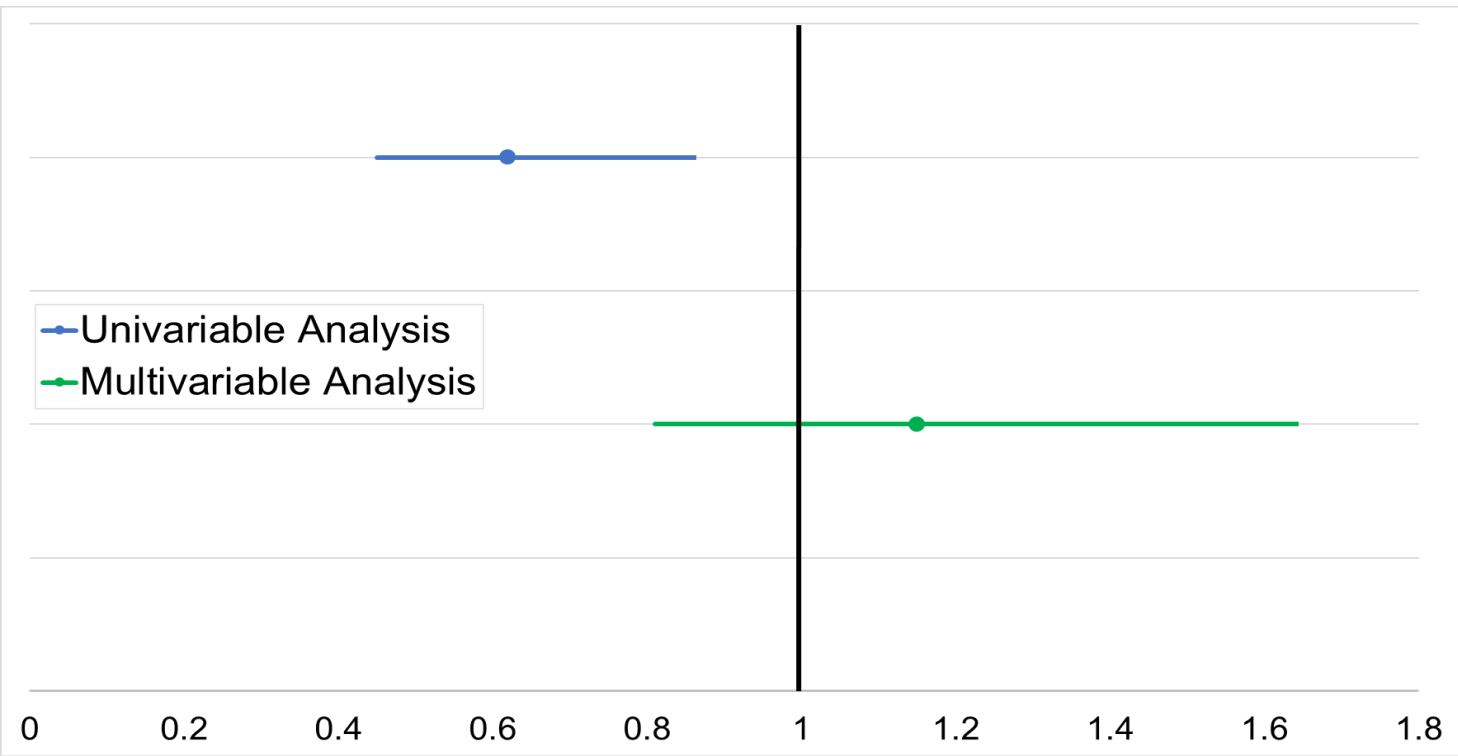
- Retrospective analysis comparing mortality outcomes between subjects that received ketamine vs. non-recipients
- Searched Department of Defense Trauma Registry using theater and military operation parameters
- Searched for all subjects with an Abbreviated Injury Scale of 3 or greater for the head body region
- We compared prehospital ketamine recipients to non recipients
- Our primary outcome was survival

Acknowledgements

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Results

Total patients n = 4183	Administered Ketamine n = 209	Not Administered Ketamine n = 3974
Demographics		
Median Age	24	25
Gender: Male	208	3845
Female	1	129
Mechanism of Injury		
Explosives (n = 2254)	5.5% (n = 125)	94.4% (n = 2129)
Gunshot wound (n = 937)	6.4% (n = 60)	93.6% (n = 877)
Motor Vehicle Crash (n = 617)	2.8% (n = 17)	97.2% (n = 600)
Other (n = 375)	1.9% (n = 7)	98.1% (n = 368)
Severity of Injury		
AIS BR2 (face) Mean Score	1.0 (SD ± 1.0)	0.9 (SD ± 1.0)
AIS BR3 (thorax) Mean Score	0.9 (SD ± 1.5)	0.8 (SD ± 1.4)
AIS BR4 (abdomen) Mean Score	0.6 (SD ± 1.1)	0.5 (SD ± 1.1)
AIS BR5 (extremities) Mean Score	1.4 (SD ± 1.6)	1.0 (SD ± 1.3)
AIS BR6 (superficial) Mean Score	0.8 (SD ± 0.7)	0.8 (SD ± 0.7)
ISS Mean	24.5 (SD ± 12.1)	23.2 (SD ± 11.4)



Limitations

- Retrospective study
- TBI diagnosis determined by AIS
- Lack of imaging of patients
- Limited number of female patients
- Limited age range of patients

Conclusions

- Subjects in our ketamine group had more severe injuries and received more life saving interventions than controls
- When controlling for confounders, we found no association between administration of ketamine and decreased survival outcomes