

THE RELATIONSHIP BETWEEN ALCOHOL MISUSE AND FRACTURE OUTCOMES IN THE ELDERLY

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RESEARCH QUESTION

Do elderly patients (> 60 years old) admitted to the hospital with fractures and chronic alcohol misuse demonstrate differing healing outcomes, in comparison to those with fractures and no chronic alcohol misuse? Specifically, do these patients differ in 1) healing fractures, 2) length of hospital stay, 3) length of ICU stay, and/or 4) mortality?

BACKGROUND

Alcohol is attributed to a variety of health issues and continues to prove to have adverse health effects. The causative relationship between alcohol and fracture is strong for both osteoporosis and fracture risk. However, there are few studies that have evaluated clinical outcomes of alcohol related injury or hospital-based outcome, such as length of stay. If different than non-alcohol related injuries, this alcohol-related injury pattern may allow healthcare workers better understanding for what to expect, how to intervene, and what outcomes may occur. Additionally, cessation intervention to address the treatment of osteoporosis and additional fractures may carry both personal and societal benefits.

Alcohol use increased ICU length of stay in elderly patients with concomitant fractures. Hospital length of stay and 1-year mortality were not significantly affected.



MORE INFO



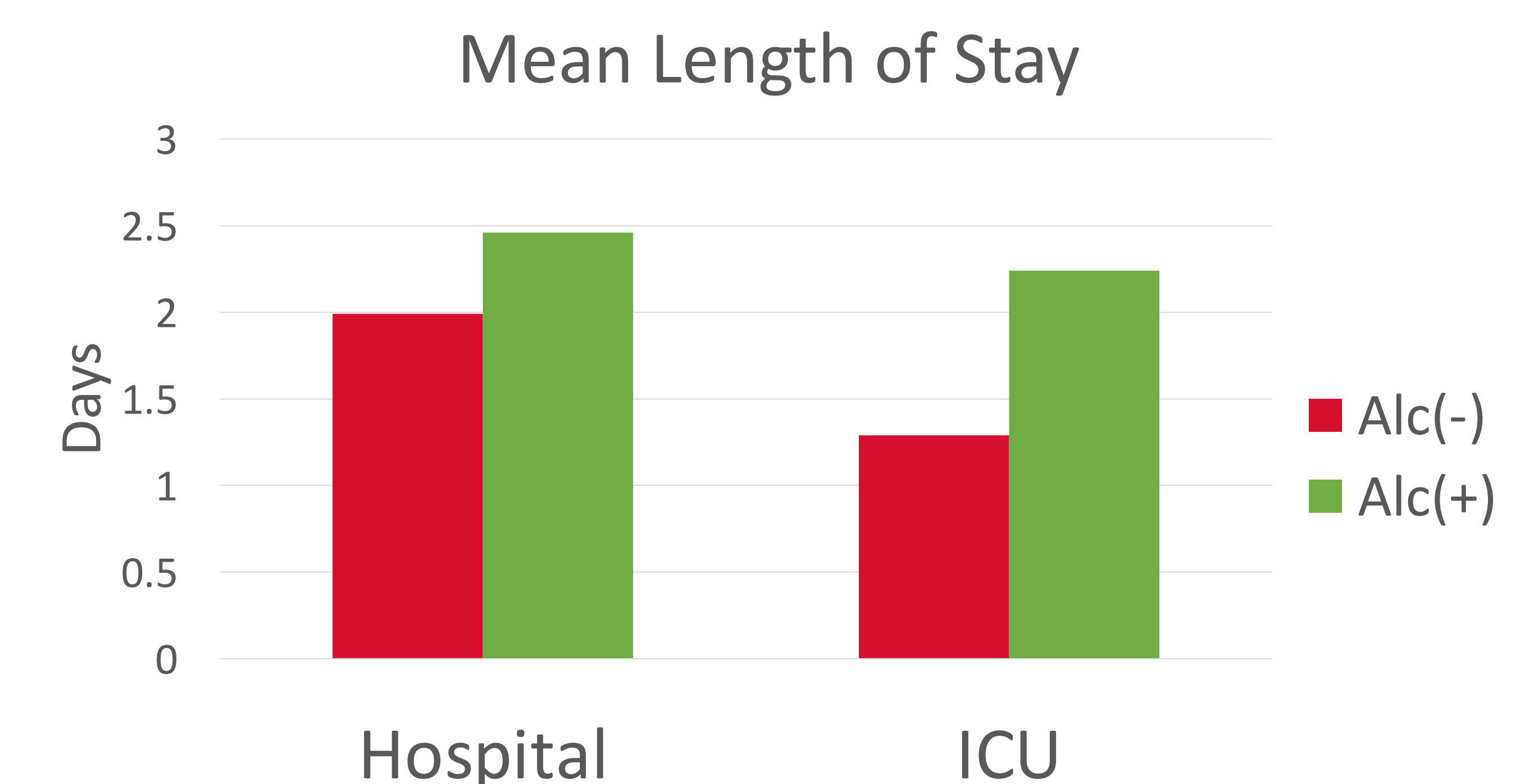
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METHODS

A retrospective cohort study and chart review was performed. Patients admitted to Texas Health Harris Methodist Fort Worth with fractures of the axial skeleton and spine between January 2010 and December 2019 were identified for the study. Patients who presented with fractures and 1) laboratory test for ethanol level, and 2) those undergoing substance abuse screening using the SBIRT tool were then evaluated for outcomes including length of hospital stay, length of ICU stay, and mortality. The specific results of the Alc(+) group were then compared to the Alc(-) group.

RESULTS

The results showed that there was no statistically significant difference in mean hospital length of stay (LOS), no statistically significant difference in mortality, and a statistically significant longer mean ICU LOS days Alc(+) compared to Alc(-). The mean ICU LOS was estimated to be 0.95 days longer (95% CI [0.20, 1.71 days]) for the Alc(+) group than the Alc(-) group.



Days	Risk of Mortality Among Matched Patients (ALC-)					Risk of Mortality Among Matched Patients (ALC+)					
	Patient at Risk	Deaths (%)	Standard Error	95 % CI		Patient at Risk	Deaths (%)	Standard Error	95 % CI		P-Value
1	237	4 (1.69)	0.008	0.967	1.000	238	1 (0.42)	0.004	0.988	1.000	-
7	232	2 (0.86)	0.102	0.955	0.995	235	2 (0.85)	0.007	0.973	1.000	0.313
30	226	6 (2.65)	0.142	0.922	0.978	230	5 (2.17)	0.012	0.944	0.990	0.360
90	221	5 (2.26)	0.017	0.896	0.962	227	3 (1.32)	0.014	0.927	0.981	0.242
365	210	11 (5.24)	0.021	0.842	0.924	216	11 (5.09)	0.019	0.872	0.945	0.450