

ASSOCIATION OF ALCOHOL INTOXICATION AND DEEP BURNS: A CASE STUDY

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ABSTRACT

Alcohol intoxication is a major problem in the country. Most burn patient fatalities present with history of alcohol intoxication and those who recover from the acute phase, alcohol intoxication increases the chance of infection and morbidity as well as mortality. Due to the effect of intoxication, a patient seems to be oblivious to the occurrence and thereby increases the incidence of deep burns. In this article we would like to share our experience regarding correlation between alcohol intoxication and deep burns.

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INTRODUCTION

Burn injury causes severe morbidity and mortality, and is considered a major public

health issue developing countries.⁽¹⁾ In developing settings such as India, the correlation between the depth of burns and alcohol intoxication has not been paid attention to. About 38.1% of the population in

the world who are above 15 years of age consume alcohol in a regular basis.⁽²⁾ Prevalence of alcohol use disorder in India in the year 2010 was 2.6% and that of alcohol dependence was 2.1%.⁽³⁾ No studies have been conducted in India to assess the correlation between alcohol and occurrence of deep burns. We hereby share our experience of associating the occurrence of deep burns in patients who were intoxicated with alcohol.

MATERIAL AND METHODS

The study was conducted in a tertiary burn care center, Department of plastic surgery, during the period of January 2020. The patient was a 45 year old gentleman, illiterate, and a carpenter by occupation, with alleged history of sustaining about 70% thermal burns. Patient was under the influence of alcohol when he had a quarrel with his family members, and self immolated himself with kerosene. Unlike usual, the patient was insensible to pain due to the alcohol intoxication, and his family had to put off the fire, as he had not realised that he was getting burnt. On examination, the patient had sustained deep thermal burns along with associated inhalational injury. Patient was intubated and managed for inhalational injury. The deep burns were managed with tangential excision and skin graft. For inhalational injury, pulmonologist opinion was obtained

and was started on inhalational steroids, inhalational heparin and salbutamol. Patient was planned for a fiberoptic bronchoscopy once he was stable hemodynamically. Patient was also managed with IV fluids, antibiotics, and analgesic. Despite of all treatment, patient's condition deteriorated on day 4, and patient expired, due to 70% deep thermal burns with inhalational injury. (Fig 1)



Fig 1: Patient with deep thermal burns and inhalational injury

DISCUSSION

Alcohol consumption and intoxication leading to burns can cause increased morbidity and mortality.⁽⁴⁾ The detrimental effect of alcohol affects various organs in the body like cancer, liver cirrhosis, neuropsychiatric disorders, cardiovascular diseases and diabetes.⁽⁵⁾ Alcohol consumption and intoxication can lead to several lethal injuries. Like in the above described patient, had he not consumed

alcohol, though he might have self immolated himself, he would have attempted to put it off himself by either dousing himself with water or rolling on the floor. This can be explained by the fact that alcohol intoxication increases the risk of injury due to factors such as diminished coordination and balance, increased reaction time and impaired attention, perception and judgement. ⁽⁶⁾ The increased risk of severity as in our case is noted by inhalational injury, fractures and deeper wounds. ⁽⁷⁾ In addition to this, burn injury due to alcohol use and intoxication are associated with increasing complications like infection, skin graft loss, donor site conversion, organ system failure and pneumonia. ⁽⁷⁾

This case report explains the incidence of deep burns in alcohol intoxication and its association with mortality and morbidity. Not many studies have been done in the country to link the association between deep burns and alcohol intoxication. The Drawbacks of the study is that it is a single centre, single case study. Multicenter randomized control trials are required to validate the study.

CONCLUSION

Consumption of alcohol increases the chances of deep burns due to lack of awareness, in

addition to increasing the morbidity and mortality due to the systemic effects of alcohol. Correlating between alcohol and deep burns can be done only if a multicenter randomized control trial is conducted.

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There is no conflict of interest.

Authors' contributions

All authors made contributions to the article

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