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Current practice in provision of alcohol assessment and support for patients following alcohol related facial fractures

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Objectives. The algorithm for maxillofacial trauma management is well defined; however, provision of alcohol assessment for patients after trauma is not widely practiced. This study aims to investigate the rate of alcohol assessment achieved within the demographic characteristics of patients with facial trauma and the circumstances where this intervention was implemented.
Study Design. This study retrospectively examined the Victorian Admitted Episodes Data Set (VAED) from 2004 to 2013.
Results. Of a total of 54,730 presentations with facial fractures to all Victorian hospitals, 0.9% in the non–alcohol-involved group and 4.3% in the alcohol-involved group received alcohol assessment during their inpatient stay ($P < .001$). Among patients with alcohol involvement, the likelihood of assessment was significantly different with regard to length of stay, age, trauma mechanism, and gender. Positive blood alcohol test did not relate to probability of assessment. Those with acute alcohol intoxication were less likely to be assessed ($P < .001$), whereas those with harmful alcohol use, alcohol dependence, or alcohol withdrawal state were much more likely to be assessed ($P < .001$).
Conclusions. This study found no consistent practice of alcohol support to patients following alcohol-related facial fractures. Post-trauma alcohol support may optimize perioperative management of patients and education regarding alcohol harm and may reduce future trauma risk. Development and refinement of such practice is an area for further research. (Oral Surg Oral Med Oral Pathol Oral Radiol 2018;■■:■■–■■)

Alcohol intoxication has an overarching harmful effect in the perioperative management of trauma patients. Studies described higher risk of postoperative complications in patients who have a history of alcohol abuse.[1,2] Patients can also suffer long-term cosmetic and functional deficits,[3] as well as prolonged psychological effects, such as post-traumatic distress disorder symptoms.[4,5] Despite the potential for chronic dysfunction and permanent disfigurement, there is a significant association between alcohol-related facial trauma and injury recurrence and risk toward relapse into previous harmful drinking behavior.[6] It is practically challenging to implement an in-depth assessment and counseling in hospital settings, and such support will require referral to a dedicated drug and alcohol unit. However, an abbreviated form of alcohol assessment, such as alcohol screening and a brief intervention (SBI), is a simple and clinically established method for provision of alcohol assessment and support.[7]

Following hospital admission for alcohol-related trauma, clinicians have the unique opportunity to offer education and support to prevent patients' harmful drinking behaviors and potentially reduce future occurrence of similar injuries.[8] There are several reasons to justify the routine practice of SBI. A high proportion of trauma patients have been found to have binge drinking habits.[9] Patient who demonstrate traits of alcohol dependence have higher likelihood of being a perpetrator or victim of interpersonal violence (IPV).[10] Patients with an alcohol problem may not voluntarily seek active treatment from their primary care physicians.[11]

SBI consists of first screening the patient's alcohol risk profile and then implementing an intervention program appropriate to the risk level identified. Alcohol-related illness is frequently underscreened and underdiagnosed in acute settings. Blood alcohol level is used commonly in acute settings to ascertain the presence of alcohol intoxication. However, blood alcohol testing is not mandatory except in the context of a motor vehicle accident (MVA) for medicolegal reasons. Furthermore, there is no clear relationship between blood alcohol concentration at admission and the likelihood of developing alcohol withdrawal syndrome.[12] Laboratory tests, such as the liver function test, are useful adjuncts but do not provide information about patients who may have already progressed to alcohol withdrawal syndrome.[12] The more accurate way to assess patients' level of harmful alcohol use is through a screening questionnaire, such as the CAGE (cut-annoyed-guilty-eye) questionnaire, or other validated

Statement of Clinical Relevance

Alcohol assessment and support for patients following alcohol-related facial trauma can potentially reduce alcohol use and trauma recidivism after discharge. This study investigated the rate of alcohol assessment achieved within the demographic characteristics of patients with facial trauma and the circumstances where intervention was implemented.

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screening tools, such as AUDIT (Alcohol Use Disorders Identification Test) and ASSIST (Alcohol, Smoking and Substance Involvement Screening Test) questionnaires.[13-15]

Patients who have positive results in the screening for hazardous drinking can then progress to receiving intervention/ alcohol support. Miller and Heather defined a SBI as "short and inexpensive interventions among individuals who are not complaining or seeking help for addictive disorders."[16] This can be achieved with or without individual feedback from clinicians or allied health care staff, formal consultation with trained professionals, information pamphlets, and computerized feedback.[7,17,18]

Alcohol assessment and support are not regarded as part of routine acute surgical care, but they can be performed without significant time constraints in busy emergency department (ED) or surgical settings. The American College of Surgeons Guideline mandates implementation of SBI in acute settings to patients with alcohol involvement.[19] It reinforces responsibility for intervention to be shared among surgeons, physicians, nurses, and allied health care workers. Provision of SBI should also include psychosocial support and referral to appropriate specialist drug and alcohol units for continuing care if necessary. However, this practice is not routinely implemented in Australian hospitals. This study aimed to investigate the rate of alcohol assessment achieved within the facial trauma patient population in a statewide trauma database; determine the circumstances where this intervention was implemented; and explore possible treatment barriers. The results of this study would then guide researchers to formulate a feasible alcohol screening and intervention strategy in a pilot study.

MATERIALS AND METHODS

The VAED is a standardized set of data collected during all hospital presentations in Victoria and was accessed via Turning Point Drug and Alcohol Eastern Health. This database is used by the Department of Health for health care planning, policy formation, research, and funding. This study analyzed data from the VAED data set between 2004 and 2013. Presentations were from 5 sources: statistical admission, emergency presentation, direct admission, waiting list, and others. Emergency presentations to Victorian hospital EDs were retrieved via the Victorian Emergency Minimum Dataset. Direct admissions also encompassed admissions from general practitioners, external clinicians, and admission from outpatient departments for emergency management. Presentations from waiting lists were retrieved from the public hospitals' Elective Surgery Information System. Other presentations include non–Elective Surgery Information System admissions and planned admissions.

The complete VAED data contained patient identifiers, funding information, and non–facial trauma admissions, which were reviewed and removed by the data custodian before data analysis. The edited data set contained only deidentified facial trauma presentations, along with patient demographic characteristics, medical diagnoses, and treatment. Incomplete entries were removed before analysis. However, statistical admissions (defined as admissions when patients were transferred from one team to another) were included in the analysis to ensure that information on all patients receiving alcohol assessment was captured in the database. For instance, patients who were transferred from an acute surgical unit to a rehabilitation unit after surgery would be considered a statistical admission.

The VAED diagnosis codes are based on the International Classification of Diseases (ICD) codes. The VAED treatment codes are based on the Australian Classification of Health Intervention procedure codes. During the period 2004-2014, there were several iterations of ICD and Australian Classification of Health Intervention coding. The appropriate coding set was consulted for the relevant year. The diagnosis of alcohol-related injury was based on blood alcohol measures and specific ICD code terms used by clinicians at the time of presentation. Presentations with ICD codes Y90, F10, and T51 were recorded for alcohol involvement and degree of alcohol abuse.

Coding under "Drug and alcohol mental and behavioural assessment" was retrieved from this data set for analysis. A drug and alcohol mental and/or behavioral assessment may involve a general assessment interview and evaluation; physiologic history and examination; and psychiatric, psychological, psychosocial and mental state examination. Assessment was conducted via use of questionnaires, checklists, neuropsychological, psychological, and psychometric tests and outcome measures. Following on from assessment, patients may also receive interventions, including treatment plans or programs, ordering of diagnostic tests, prescription of medication or aids and devices, referral to another service provider, or consultation with other service providers. This code is aimed at assessing the cause of the drug or alcohol addiction and the formulation of a plan and referral to other service providers. Alcohol interventions were recorded as counseling, by either clinician or allied health care staff, and treatment for alcohol withdrawal during inpatient stay.

Ethical approval for this study was obtained from Eastern Health Victoria. Analysis of data was carried out on IBM SPSS Statistics version 23 software. Relationships between categorical variables were tested by using the χ^2 test. Relationships between 1 dichotomous and 1 continuous variable (i.e., age in years) were tested by using independent sample t test. A significance level of $P < .05$ was applied for these tests.