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National Epidemiology of Auricular Hematoma in Emergency Departments

The primary objective of this study was to elucidate on the epidemiology of auricular hematoma (AH) within the emergency department setting and to investigate predictors of direct hospital admission related to AH.

Methods: A cross-sectional study was conducted utilizing the National Electronic Injury Surveillance System database. Patients (n=547) presenting to the emergency department with AH between 2010–2020 were isolated. Age groups were defined as: G1 (less than 18 years old), G2 (18-64 years old), G3 (65 years or older). Incidence rates per 1,000,000 people-year were calculated using national estimates provided by the database as well as U.S. Census Bureau estimates of population. Multivariate logistic regression analysis was done to identify predictors of direct hospital admission.

Results: A national estimate of 11,472 patients between 2010–2020 was calculated. 9,066 (79.0%) were male with an estimated male/female ratio of 3.8 to 1. The most likely etiologies were household goods/furniture (HGF) (50.4%), followed by wrestling (22.4%).

The overall IR of AH between 2010–2020 was 3.2 (2.7–3.8) with a significantly increasing trend over the study period (17.7%; $p=0.049$). There has been an increasing trend of HGF (17.3%; $p=0.006$), and martial arts (4.3%; $p=0.040$), but a seemingly increase in wrestling (1.4%; $p=0.744$).

G2 (OR 5.3) and G3 (OR 13.7) patients have increased odds of direct hospital admission compared to G1 (all, $p<0.001$). Compared to wrestling, HGF (OR 5.1), and other sports/exercise (OR 7.4) were risk factors for hospital admission (all, $p<0.001$).

Conclusion: The incidence of AH between 2010-2020 is reported with an estimated male/female ratio of 3.8 to 1 and has been significantly increasing. Although AH patients are classically described in the literature to be involved in contact sports such as wrestling and martial arts, our study found HGF to be the most likely etiology of AH as well as a significant predictor for direct hospital admission.