The epidemiology of chemical eye injuries.

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The epidemiology of chemical eye injuries.

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Abstract
PURPOSE: To describe the epidemiology and identify categories of agents involved in chemical eye injuries.

METHODS: Retrospective case series of consecutive cases of chemical eye injury presenting to the emergency department (ED) at a large eye hospital. Six-hundred and thirty-three patients presented to the ED between January 1, 2006 and December 31, 2009 for treatment of 640 chemical eye injuries. Information was collected via medical record review and chemical agents were classified into logical categories based on the patient-reported intended use of the product. Demographic measures, month of service, work-related status, and visual acuity at presentation were described overall and by chemical agent category.

RESULTS: Males were more often observed than females (58.4% vs. 41.6%). The mean age across all categories was 33.6 years. More injuries were observed in warmer months. The mean visual acuity for all available injured eyes was 0.17 logarithm of the minimum angle of resolution (20/30 Snellen). The most common categories of chemical agents were cleaning agents, personal care products, and automotive chemicals. Thirty-nine cases were observed as having misidentified a product which led to injury.

CONCLUSION: Patterns of eye trauma resulting from chemicals differ by gender, across age groups, and during different months of the year. In most cases, chemical eye injuries do not threaten sight. Improvements in product labeling and design could represent an avenue to prevent
some chemical eye injuries.