

Ocular Trauma from Interpersonal Violence: A Retrospective Analysis from an Ophthalmic Emergency Department

Mariam Tadross BS,¹ Mona El Gendi BS,¹ Kara M. Cavuoto MD¹

Author affiliations: ¹Bascom Palmer Eye Institute, University of Miami Miller School of Medicine, Miami, Florida, USA

Presenting Author:

Mariam Tadross BS

Email: mmt123@miami.edu

Phone: 216-317-0093

Introduction; Interpersonal violence is a significant public health issue and a common cause of ocular trauma, often resulting in vision-threatening injuries. Ophthalmologists may be among the first clinicians to encounter victims of interpersonal violence, placing them in a critical position to identify at-risk individuals and facilitate appropriate intervention.

Methods; We conducted a retrospective review of patients ≥ 18 years who presented to a single tertiary referral center between 2015 and 2024 with ocular injuries inflicted by another individual. Patients were identified through clinical documentation indicating interpersonal violence as the mechanism of injury. Data collected included patient demographics, relationship to the aggressor, clinical findings, treatment requirements, and follow-up status. Zip code-level socioeconomic variables were also obtained to assess neighborhood-level economic and social characteristics. Descriptive analyses were performed to characterize demographic, socioeconomic, clinical, and follow-up features of the study population.

Results; The incidence of interpersonal violence-related ocular trauma was 0.06%. Among 123 patients (mean age: 41 years), 57.7% (71/123) were female and 55.4% (67/123) identified as Black or African American. Aggressors most commonly included domestic partners (35.0%) and strangers (27.6%), with hand-delivered aggression accounting for 82.1% of injuries. Medical intervention was required in 59.3% (73/123), and surgical treatment in 11.4% (14/123). Police or social services were involved in 43.9% (54/123) of cases, and 36.6% (45/123) were lost to follow-up. Patients primarily originated from neighborhoods with lower median incomes, higher uninsured rates, and high proportions of residents living below the federal poverty level.

Conclusions; Interpersonal violence-related ocular trauma disproportionately affected women and Black patients and frequently affected patients from socioeconomically disadvantaged neighborhoods. Given that more than one-third of patients were lost to follow-up and fewer than half had documented social service involvement, ophthalmologists have a critical role in screening and referral to prevent further harm and vision loss.