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ABSTRACT SUBMISSION TITLE: *B2 - Ophthalmology Consultation and Outcomes in Orbital Fracture Management: A Retrospective Analysis*

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Abstract Text:

PURPOSE:

Various medical specialties are involved in the evaluation and treatment of orbital trauma, though the specialty consulted may vary based on institutional protocols. Improper assessment or delays in diagnosis can lead to poor outcomes given the complex nature of these injuries and surrounding anatomy. Much existing literature assessing interventions and outcomes associated with orbital fractures does not highlight specialties involved or only includes one specialty. This study evaluates the impact of ophthalmology consultation on treatment patterns, revision rates, and outcomes in orbital fracture management.

METHODS:

A retrospective chart review for all orbital fracture consultations at a single institution between 2014-2024 was completed. Data capturing demographic information, pre-existing medical conditions, mechanism of injury (MOI), presenting symptoms, diagnoses, surgical interventions, and persistent symptoms were collected (ICD-10: S02.XX). Patients lacking adequate follow-up data were excluded. Descriptive statistics

summarized patient and injury characteristics. Odds ratios (OR) with 95% confidence intervals (CI) were computed using logistic regression. Categorical variables were compared using Chi-square or Fisher's exact tests when appropriate.

RESULTS:

Three-hundred eighteen orbital fracture consultations were identified; 86 cases (64M, 21F, 1 unspecified; mean age=48.3 y) were ultimately included for analysis. The most frequent MOI were falls (35.0%) and assault (25.0%). Ophthalmology (n=38) and plastic surgery (n=32) were most frequently consulted, but otolaryngology and OMFS had the highest surgical intervention rates (52.2% and 50.0%, respectively). Patients with diplopia (48.1%; $p=0.005$) and eye movement limitations (37.9%; $p<0.001$) most frequently underwent surgery. No significant differences were found between time to surgery, presenting symptoms, or fracture types. Only 2 individuals had surgery on the same day as ED presentation. Those operated on by ophthalmology (n=3) had no revision procedures. No statistically significant association existed between index surgeon and revision rates.

CONCLUSIONS:

While ophthalmology was the most frequently consulted specialty for orbital fractures, outcomes and surgical decisions related more to presenting symptoms than the consulting or treating specialty. This highlights the need for standardized assessment and consultation protocols to enhance workflow efficiency and optimize patient care.