

Examining Incidence of Acute Angle Closure Glaucoma in U.S. Emergency Departments

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Abstract

Introduction:

Acute angle closure glaucoma (AACG) is a medical emergency that presents with blurred vision, painful red eye, headache, nausea, and vomiting. AACG presents from a rapid rise in the intraocular pressure in the eye most common due to a sudden blockage in the drainage of aqueous fluid. Strong risk factors associated with AACG include female gender, hyperopic vision, previous AACG, advanced age and Inuit and Asian ethnicity. The purpose of this study was to identify additional factors that contribute to AACG.

Methods:

The 2015 Nationwide Emergency Department Sample (NEDS) was used to model the incidence of AACG in U.S. emergency departments based on various patient demographic and socioeconomic data. There were 5,241 weighted cases (0.0046%) of acute angle closure glaucoma in the 2015 NED dataset.

Results:

Results of multivariate logistic regression indicate that older patients, particularly patients 65-84, were significantly more likely to present to the ED with acute angle closure glaucoma (OR: 21.036, CI: 3.104;142.547). Males were significantly less likely to present with acute angle closure glaucoma than females (OR: 0.614, CI: 0.461; 0.817). There were no significant differences based on payer or median household income. While no significant differences were found based on the presence of the comorbidity heart failure, patients without hypertension or diabetes were significantly more likely to experience acute angle closure glaucoma than patients with hypertension or diabetes.

Conclusions

The results of this study provide further evidence on the risk factors that contribute to AACG. Interestingly, those with hypertension or diabetes were less likely to experience AACG. A potential protective mechanism of these comorbidities can be explored further in future analyses.

Biography:

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