Systemic Medical History in Patients with Injection Associated Endophthalmitis

Kenneth Warren Price, MD
Decatur, GA

Jiong Yan, MD

Purpose:
The purpose of this study is to describe a detailed past medical history of individuals with injection associated endophthalmitis and statistically compare them to a cohort of individuals who did not develop endophthalmitis in order to determine if there is any particular systemic medical conditions which may have a higher association with the development of injection associated endophthalmitis.

Methods:
A retrospective comprehensive chart review of two groups: [1] Those who received an intravitreal injection and were subsequently diagnosed with endophthalmitis; [2] those who received an intravitreal injection by the same provider and around the same time as group [1] who subsequently did not develop endophthalmitis.

Results:
A total of 34 individuals (36 cases) were diagnosed with injection associated endophthalmitis between 2009 and 2019. For every one case of injection associated endophthalmitis, four individuals who received injections by the same provider within 14 days before or after the patient in question but did not subsequently develop endophthalmitis were collected as controls for a total of 144 patients. Baseline characteristics of both groups are seen in table 1.

The medical history of both groups were significant for 29% with type 2 diabetes in group 1 versus 36% of group 2 (controls), 79% with hypertension in group 1 versus 73% of group 2, 35% with coronary artery disease and/or history of stroke vs 31% of group 2, 29% with significant pulmonary disease vs 10% of group 2, 24% on systemic anticoagulation vs 16% of group 2, and 12% with a history of immunosuppression vs 1.4% of group 2 controls.

Conclusions:
This study represents baseline medical history analysis of patients who subsequently developed injection associated endophthalmitis and compares the underlying medical history to those who did not. Statistical analysis along with multicenter collaboration is currently underway. Limitations of this study include its retrospective nature, small sample size, single center location. This study would enhance our understanding of any association between a patient’s medical history and the development of injection-associated endophthalmitis. If significant differences exist, it would contribute greatly to patient education on the potential risks of intravitreal injection, one of the most commonly performed procedures in ophthalmology.