No cases of endophthalmitis after 20,293 intravitreal injections

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Introduction

Intravitreal injections with anti-vascular endothelial growth factor (VEGF) has become a common procedure. A rare, but dreaded, complication is bacterial endophthalmitis that has a poor visual prognosis. As we have yet to experience a case of post injection endophthalmitis we describe our setting and compare it to previous studies.

Methods

We included all patients that had received an anti-VEGF injection at our department until May 2013. All patients had at least two months of follow-up after the data collection. Endophthalmitis was defined as suspected cases where intravitreal antibiotics were given regardless of a subsequent positive culture.

Results

We have performed 20,293 intravitreal injections in 2,575 eyes with no suspected cases of endophthalmitis corresponding to an incidence of 0% (95% CI 0-0.015% or 0-1/6,500) per injection and 0% (95% CI 0-0.12% or 0-1/850) for our average patient receiving 7.9 injections. Ranibizumab was used in 20,024 injections and aflibercept in 269 injections. Twenty-eight doctors performed the injections (median 440 injections per doctor, interquartile range 280-675).

Key Factors

✓ Use of operating room with positive pressure ventilation
✓ Adherence to sterile procedure including use of cap and face mask
✓ Avoidance of topical antibiotics pre-operatively potentially preventing drug resistance
✓ Two irrigations of the conjunctiva with 5% povidone-iodine peroperatively at least 30 seconds before the injection
✓ Application of topical aminoglycoside immediately postoperatively
✓ ~ 7,000 injections without a post-operative course of aminoglycoside (patients without diabetes after January 2012)
✓ Scheduling that allows adequate care for each patient

Conclusion

Our department has had the lowest rate of post injection endophthalmitis described in the current literature. We highlight several factors that could have contributed to our positive results. Omitting a post-operative course of aminoglycoside was safe in patients without diabetes.

Further information

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