Background and importance

Endophthalmitis is a serious complication, which is becoming more frequent due to population ageing and the steady increase of intravitreal injections with anti-angiogenic drugs (IAD).

Aim and objectives

To analyse the incidence of endophthalmitis in patients who received IAD, to describe the population affected and to classify endophthalmitis.

Material and methods

A retrospective observational study was conducted from January 2017 to December 2020. Patients who received any IAD (aflibercept or ranibizumab) and developed endophthalmitis were included.

Aflibercept was preloaded in syringes in a safety cabinet (SC) while ranibizumab was ready to use. IAD was performed in a ‘clean room’, 5% povidone iodine or 0.05% chlorhexidine eye drops (in patients allergic to iodine) prepared in a SC by the Pharmacy Service were administered in the conjunctival sac, a blepharostat was placed and the drug was administered. Antibiotic eye drops were recommended according to the ‘Spanish Vitreo-Retinal Society’.

Patients who developed endophthalmitis were admitted to hospital. Cultures were taken, intravitreal, topical and/or systemic antibiotic treatment was administered. The need for vitrectomy was assessed individually, requiring follow-up until resolution.

Endophthalmitis was classified by: (1) time: acute (less than 6 weeks since the procedure) or chronic (more than 6 weeks), (2) aetiology: infectious (positive culture) or non-infectious (negative culture) and (3) severity: good or bad prognosis (according to clinical criteria).

Results

12 057 IAD (7765 aflibercept, 4292 ranibizumab) were administered and 7 endophthalmitis (incidence 0.058%) were recorded, always after using aflibercept.

All cases were acute (always within 10 days after last IAD), 4 infectious (3 with Staphylococcus epidermidis and 1 with Micrococcus luteus) and 3 non-infectious. One case (14%) ended up with a bad prognosis.

Mean age was 63 (46–83) years, 4 males and 3 females. The average length of stay in hospital was 12 (7–21) days. Vitrectomy was performed in 4 patients. Average number of IAD received until development of endophthalmitis was 5 (2–11); 6 patients (85%) developed it after 3 or more IAD.

Conclusion and relevance

Endophthalmitis after IAD is an acute, usually infectious, potentially hazardous and infrequent complication (0.019%–0.58%, incidence rate similar to previously reported). It always occurred with aflibercept, so drug handling, even under sterile conditions, might be a risk factor.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest

No conflict of interest