

(X) R1 ( ) R2 ( ) R3 ( ) PG0 ( ) PG1 ( ) Estagiário ( ) Tecnólogo ( ) PIBIC

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### **Systemic and ocular hemorrhage after intraocular injection of Bevacizumab**

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**Purpose:** To report systemic and ocular hemorrhage cases following intraocular bevacizumab injection.

**Methods:** A noncomparative case series of six eyes from six patients who had hemorrhage after undergone intraocular bevacizumab injection out of 1,011 intravitreal injections were included. Four eyes received intravitreal injection (2.5mg (2 eyes), 1.25mg (2 eyes)). Other two intraocular injections (2.5mg) were performed into anterior chamber. All patients underwent a complete eye examination. Systemic work-up was performed in order to investigate hematologic underlying abnormalities.

**Results:** Four patients had ocular hemorrhages: vitreous hemorrhage (2), subretinal hemorrhage (1) and subconjunctival/ periocular hemorrhage (2). Vitreous hemorrhage was observed on the second day after injection as intra-operative adjuvant treatment for iris melanoma. Subconjunctival hemorrhage was associated to periocular hemorrhage seven days after intracameral injection for neovascular glaucoma. Another subconjunctival hemorrhage related to periocular hemorrhage occurred one day after therapy for choroidal neovascularization (CNV). Severe subretinal hemorrhage was correlated to vitreous hemorrhage following CNV therapy. Systemic bleedings (2) were metrorrhagia and severe epistaxis. Metrorrhagia was seen fourteen days following therapy for retinal vein occlusion. Severe epistaxis was found thirty hours after treatment of CNV. No systemic abnormalities in coagulation were found in any patient, except for the use of aspirin in one patient. Two patients had diabetes mellitus and one systemic hypertension.

**Conclusions** Six patients of 1,011 (0,6%) had hemorrhagic episodes after administration of intraocular bevacizumab. Systemic and intraocular anti-VEGF therapy may be associated with systemic or intraocular hemorrhage, as reported by clinical trials after systemic injection for colorectal metastatic cancer. Further investigation is necessary to evaluate this correlation.