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Service (sector) Retina and Vitreous N° CEP

### **Subretinal migration of Avastin® after intravitreal injection**

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PG  Estagiário  Tecnólogo

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**Purpose:** To evaluate the possibility of subretinal migration of Avastin® (Genetech, USA) as well as its concentration into the subretinal space 2 hours after intravitreal injection of this drug. **Material and Methods:** Seven rabbits were submitted to paracentesis and removal of 0.2 ml of aqueous humor in the right eye. Animals were divided in two groups: **Group A)** Three rabbits were submitted to intravitreal Avastin injection of 0.1ml (2.5mg) after a transcleral retinal detachment using a 25-gauge infusion needle and subretinal injection of 0.2 ml of balanced salt solution (BSS). **Group B)** Four rabbits were submitted to intravitreal injection of 0.1ml of BSS following a transcleral retinal detachment using a 25-gauge infusion needle and subretinal injection of 0.2 ml of BSS. In both groups, the subretinal fluid was aspirated by transcleral puncture of the subretinal fluid; the puncture was performed by 30-gauge needle (Beckton-Dickson, USA) under a direct microscopic view 2 hours after the surgical procedure in order to try to detect subretinal migration of Avastin® molecule. All eyes were enucleated for analysis of retinal site of the scleral infusion needle penetration into the subretinal space in order to detect possible retinal iatrogenic tears. The penetration of the 25-gauge infusion needle into the subretinal space was obtained by direct visualization of the needle tip using a surgical microscope as well as a surgical lens positioned on the corneal surface of the animal. All fluid aspirated from subretinal space was analysed by immunologic immunoassay for Avastin detection. **Results:** Data is under evaluation. The first sample showed that intravitreal Avastin® injection diffused through the retina into the subretinal space. The histological analysis of the retina at the site of subretinal injection showed no tears or holes. **Conclusions:** This data demonstrates that Avastin® molecule penetrates through the retina into the

subretinal space. The Avastin® concentration in the subretinal fluid is under analysis. This data is relevant to optimize intravitreal Avastin® use in humans.