

R1 R2 R3 PG0 PG1 Estagiário Tecnólogo
PIBIC Last Name - Fujii First Name - Gildo Middle - Yuso

Service (sector) Retina and Vitreous N° CEP

RETINAL VEIN CANNULATION FOR CENTRAL RETINAL VEIN OCCLUSION

AUTHORS: Gildo Y. Fujii, MD*, Michel E. Farah, MD; Mark S. Humayun, MD, Eugene deJuan, Jr, MD

PURPOSE: To conduct an experimental study to demonstrate the feasibility of a long-term retinal vein cannulation (at least 15 minutes) for the injection of thrombolytic agents directly into retinal veins in dogs in vivo. **METHODS:** Development and evaluation of a manual technique for long-term retinal vein catheterization. **Participants:** Fifteen enucleated porcine eyes and 8 in vivo canine eyes. **Main outcome measures:** The ability to catheterize the retinal vein and infuse saline or t-PA solution in a constant and stable fashion for a period of at least 30 minutes. **RESULTS:** A microcatheter instrument and a surgical technique for retinal vein catheterization were developed. A total of 12 of 15 enucleated porcine eyes and 8 of 8 in vivo canine eyes were catheterized. Once catheterized, intravenous infusion of saline was possible for the duration of the experiments in all eyes. This period of intravenous infusion ranged from 30 minutes to longer than 2 hours. On average, 0.2 cc of saline per minute could be infused into the retinal vein via the microcatheter attached to an external motorized infusion pump. **CONCLUSION:** Manual retinal vein catheterization (MRVC) for long-term intravenous infusion is feasible and may provide a mechanism to treat blinding retinal venous occlusive disease in humans.