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Service (sector) Retina and Vitreous Nº CEP

In Vivo Transcleral Drug Delivery Device: Surgical Implantation and Follow-up

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Purpose: To investigate the feasibility and safety of a surgical technique for implantation of a trans-escleral sustained-released drug delivery device to the posterior segment of the eye. **Methods:** Sustained-released drug delivery devices were designed. The devices were surgically implanted into the vitreous cavity of 2 rabbits under sterile conditions. The animals were clinically followed for up to 2 months after the surgery with complete ophthalmologic examinations, including anterior segment biomicroscopy, intraocular pressure measurements, indirect binocular fundus examination and photographs. Rabbits were sacrificed and histological evaluation was performed by light microscopy **Results:** The device was successfully implanted and the surgical procedures were performed in less than ten minutes in every case. Long-term follow-up revealed biocompatibility and lack of surgical complications. Histological evaluation demonstrated no significant abnormalities. **Conclusion:** The trans-escleral drug delivery device implantation in rabbit eyes was technically safe.