Short-term Impact of Intravitreal Drug Injection on Intraocular Pressure and Its Correlation to the Ocular Axial Length

Thesis

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List of abbreviations

ACA	Anterior chamber angle.
ACD	Anterior chamber depth.
ACG	Angle-closure glaucoma.
ARMD	Age related macular degeneration.
CNV	Choroidal neovasularization.
CSR	Central serous chorioretinopathy.
CT	Computed Tomography.
DCME	Diabetic cystoid macular edema.
EPV	Episcleral venous pressure.
FFA	Fluorescein fundus angiography.
HA	Hyaluronic acid.
IOLs	Intraocular lenses.
IOP	Intraocular pressure.
IVI	Intravitreal injection.
NCT	Non-contact tonometers.
NPL	No perception of light.
OCT	Optical coherence tomography.
OHT	Ocular hypertension.
PACG	Primary angle closure glaucoma.
PET	Positron emission tomography.
UBM	Ultrasound biomicroscopy.
VEGF	Vascular endothelial growth factors.
VP	Venous pressure.

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Introduction

Intravitreal injection (IVI) therapy is getting more and more popular nowadays. Various anti-Vascular endothelial growth factors (anti-VEGFs) agents and triamethilone (TA) are the most commonly employed drugs. Intravitreal injections of anti-VEGF agents, namely bevacizumab and ranibizumab, have been the primary treatment for age-related macular degeneration (AMD) and macular edema of vascular origin. ***(Rosenfeld et al., 2006)***

Posterior ocular diseases, including glaucoma, macular degeneration, uveal melanoma and retinoblastoma are often hard to be treated due to ocular tissue barriers. While topical administration is effective in the treatment of anterior chamber diseases, it is ineffective in the treatment of diseases afflicting the posterior segments of the eye. Major problems include washing away of the drug by tears and the inefficient diffusion of drug from the corneal side to the posterior segment. ***(Janoria et al., 2007)***

Perhaps, the most known side-effect of IVI therapy is the delayed intraocular pressure (IOP) elevation noted particularly after the TA injection. Delayed pressure rise after TA injection is studied extensively, but immediate