

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

*Thesis*

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Degree in Ophthalmology

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# **Contents**

<b>List of abbreviations</b>	<b>I</b>
<b>List of tables</b>	<b>II</b>
<b>List of figures</b>	<b>III</b>
<b>List of graphs</b>	<b>V</b>
<b>Introduction and Aim of Work</b>	<b>1</b>
<b>Chapter (1): Anatomy of the vitreous body and angle of anterior chamber</b>	<b>5</b>
<b>Chapter (2): Physiology of intraocular pressure</b>	<b>23</b>
<b>Chapter (3): Factors affecting intraocular pressure</b>	<b>39</b>
<b>Chapter (4): Intravitreal injection</b>	<b>58</b>
<b>Patients and methods</b>	<b>85</b>
<b>Results</b>	<b>92</b>
<b>Discussion</b>	<b>105</b>
<b>Conclusion</b>	<b>111</b>
<b>Summary</b>	<b>112</b>
<b>References</b>	<b>115</b>
<b>Arabic summary</b>	



## **List of abbreviations**

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



## **List of tables**

<b>Table No.</b>	<b>Title</b>	<b>Page</b>
<b>1</b>	Age distribution among the study group.	92
<b>2</b>	Number of previous IVI.	94
<b>3</b>	Mean preinjection IOP according to AL.	97
<b>4</b>	5 min. postinjection IOP in relation to AL.	97
<b>5</b>	15 min. postinjection IOP in relation to AL.	98
<b>6</b>	30 min. postinjection IOP in relation to AL.	98
<b>7</b>	Analysis of IOP rise 5 min. postinjection in relation to AL.	99
<b>8</b>	Analysis of relation between lens status and IOP rise 5 min. postinjection.	102
<b>9</b>	Comparison between different age groups as regards mean 5 min. postinjec. IOP.	103
<b>10</b>	Comparison between males and females as regard difference in mean postinjection IOP.	104
<b>11</b>	Effect of no. of previous IVI on mean 5 min. postinjection IOP.	104



## **List of figures**

<b>Fig. No.</b>	<b>Title</b>	<b>Page</b>
<b>1</b>	Vitreous structure in the human embryo.	5
<b>2</b>	Schematic diagram of vitreous anatomy.	6
<b>3</b>	Diagram of the eye showing the relationship of the vitreous and the other eye structures.	9
<b>4</b>	Diagram of ultrastructure of collagen-hyaluronic acid interaction in the corpus vitreous.	11
<b>5</b>	Structures involved in aqueous humour dynamics.	14
<b>6</b>	Three layers of trabecular meshwork.	15
<b>7</b>	Iris process.	17
<b>8</b>	Scanning electron micrograph of sinus venosus sclerae.	19
<b>9</b>	Deep sclera venous plexuses.	20
<b>10</b>	Cross section through the anterior segment of the eye.	25
<b>11</b>	Diurnal variation in Intraocular pressure.	30
<b>12</b>	Comparison of a fixed-area and a fixed-force applanation tonometers.	32
<b>13</b>	Goldmann applanation cylinder.	33
<b>14</b>	Schiotz tonometer.	34
<b>15</b>	Air puff tonometer.	35
<b>16</b>	Detection of site of injection by mm gauge.	61
<b>17</b>	Angle of penetration of needle to sclera.	64
<b>18</b>	Central macular CNV in ARMD.	66
<b>19</b>	Background diabetic retinopathy.	67
<b>20</b>	OCT showing cystoid macular edema.	76
<b>21</b>	CMV retinitis.	77
<b>22</b>	Proliferative diabetic retinopathy.	85
<b>23</b>	CSR in FFA and OCT.	86

<b>24</b>	A-Scan measuring AL and ACD.	88
<b>25</b>	IVI, showing usage of a lid speculum and local application of povidone iodine to the conjunctiva.	89
<b>24</b>	IVI, showing the pt. instructed to look superonasally	90
<b>25</b>	IOP measurement with Tonopen.	91

## **List of graphs**

<b>Graph. No.</b>	<b>Title</b>	<b>Page</b>
<b>1</b>	Sex distribution among study group.	93
<b>2</b>	pie chart illustrating the indications of IVI among studied patients.	94
<b>3</b>	Doughnut chart illustrating the percetage of phakic and pseudophakic eyes.	95
<b>4</b>	Unicolumnar chart illustrating the mean preinjection IOP and 5, 15 and 30 minutes postinjection IOP.	96
<b>5</b>	Linear curve showing effect of AL on 5 min. postinjec. IOP levels.	99



## 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