Assessment of retinal structural and functional changes in silicone oil filled eyes

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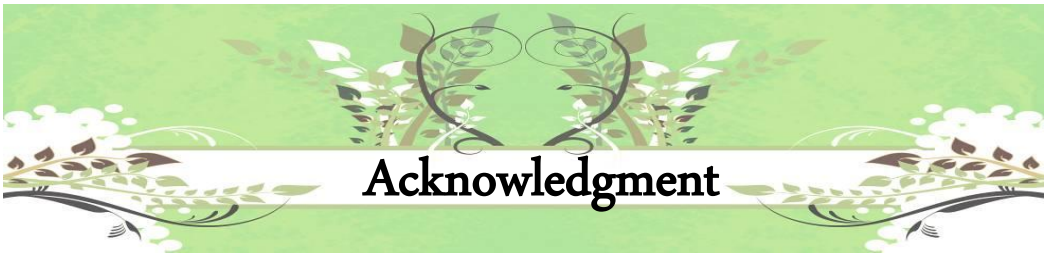

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List of Abbreviations

Abbreviation	*Full term*
AAO	American Academy Of Ophthalmology
AMD	Age related macular degeneration
BVO	Branch vein occlusion
CFT	Central foveal thickness
CME	Cystoids macular edema
CSF	Contrast sensitivity function
CRVO	Central retinal vein occlusion
ELM	External limiting membrane
EOG	Eelectro-oculogram
ERG	Electroretinogram
FA	Fluorescein angiography
FIELD MD	Field mean deviation
FIELD PSD	Field pattern standard deviation
GCL	Ganglion cell layer
INL	Inner nuclear layer

Abbreviation	***Full term***
IOP	Intraocular pressure
IPL	Inner plexiform layer
IS/OS	Photoreceptor inner and outer segment junction
NFL	Nerve fiber layer
NSR	Neurosensory retina
OCT	Optical coherence tomography
ONL	Outer nuclear layer
OPL	Outer plexiform layer
PVD	Posterior vitreous detachment
PVR	Posterior vitreoretinopathy
RD	Retinal detachment
RPE	Retinal pigment epithelium
SO	Silicone oil
SRF	Subretinal fluid
VA	Visual acuity
VEP	Visual evoked potential
VER	Visual evoked response

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Introduction

Since its introduction by Cibis et al. in 1962, vitreous replacement by silicone oil has become an increasingly accepted treatment for severe and complicated retinal detachment ***(Cibis et al., 1962).***

Silicone oil is optically clear and possesses physical properties that promote retinal tamponade. It is an active instrument for the reposition of the mobile retina, and it makes internal tamponade, stabilization and fixing of retina after vitrectomy ***(federman and Schubert, 1988).***

The tolerance of various eye tissues to the oil is, however, a matter of ongoing controversy ***(McCuen et al., 1985).***Eyes that have been treated with silicone oil sometimes lose vision due to corneal decompensation, cataract, glaucoma, or possibly oil-induced retinopathy ***(Ziliset et al., 1989).***

Because of possible complications, as described in the literature, the silicone oil should be removed from the operated eye with a precondition that retina is stable and well fixed ***(Blodi, 1971).***

Aim Of The Work

The aim of this study is to evaluate the retinal functional and structural changes in silicone oil filled eyes in successful cases of pars plana vitrectomy with silicone oil tamponade. These changes will be studied during the presence of the oil in the eye and after its removal.