Requirement of additional treatment for intraocular tumors following plaque radiotherapy

Thesis

Submitted for partial fulfillment of Master Degree in Ophthalmology

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Cairo 2011

ACKNOWLEDGMENT

First of all thanks to **GOD** for blessing this work until it has come to light as a part of His generous help throughout my life.

I would like to express my deepest gratitude and thanks to ***Prof Dr/Bahaa El-Din Abdullah Ali,*** Professor of Ophthalmology, Faculty of Medicine, Ain Shams University for his close observation and valuable remarks which provided me with the best guide during my preparation for this thesis

I am deeply indebted to ***Prof Dr/ Mohamed Mostafa Lotayef,*** Professor of Radiation therapy National Cancer Institute, Cairo University, and ***Ass Prof Dr/ Hisham Mohamed Khairy Abdel Dayem,*** Assistant Professor of Ophthalmology Faculty of Medicine, Ain Shams University for their supervision, help and the great effort they have done during the preparation and revision of the whole work.

Also special thanks to my family, colleagues and friends for their help in this work.

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CB	:	Ciliary body
cGy	:	Centi-Gray
CM	:	Choroidal melanoma
CME	:	Cystoid macular edema
COMS	:	Collaborative Ocular Melanoma Study Group
CT	:	Computed tomography
EBRT	:	External beam radiation therapy
FA	:	Florescence angiography
Gy	:	Gray (unit of radiation measurement = 100 rad)
HVL	:	Half -value layer
LM	:	Lymph node
I^{125}	:	Iodine 125
IOP	:	Intraocular pressure
MRI	:	Magnetic resonance imaging
N	:	Number
NS	:	Non significant
OCT	:	Ocular coherence tomography
P-value	:	Probability value
Pd^{103}	:	Palladium 103
RB	:	Retinoblastoma
RU^{106}	:	Ruthenium 106
RPE	:	Retinal pigment epithelium

RD	:	Retinal detachment
S	:	Significant
SD	:	Standard deviation
TTT	:	Transpupillary thermotherapy
U/S	:	Ultrasound
VF	:	Visual field

AIM OF THE WORK

The purpose of this study is to analyze the results of treatment of intra-ocular tumors with plaque radiation therapy alone and cases that required other line of treatment adjuvant with radiation therapy.

INTRODUCTION

Malignant eye tumors present 0.2 % of all malignant tumors diagnosed, but it is a direct reason of death for one in each 3 patients. ***(Paunksnis et al., 2009)*** During the past century, the prognosis of patients with ocular tumors has continuously improved owing to early diagnoses and advances in treatment strategy. ***(Galluzzi et al., 2003)***

For more than a century, enucleation has been the standard treatment for intra ocular tumors. However, concerns about enucleation, especially possible tumor spread caused by manipulation of the eye during surgery, plus vision loss and the poor cosmetic outcome; have made clinical advances focusing on intraocular tumor control enabling increased globe conservation while minimizing the risk to the patient by introducing irradiation therapy as a popular alternative. ***(Chryssanthi et al., 2008, Scott et al., 1999, Shields JA & Shields Cl., 1994)***

The most commonly used forms of radiation therapy are ophthalmic plaque brachytherapy and external beam radiotherapy (EBRT). ***(Finger, 2009)*** Radiation may conserve a useful level of vision, depending on the size of the tumour and its location with respect to the optic disc and macula***. (Chryssanthi et al., 2008)***

Radioactive plaque brachytherapy has been success-fully utilized, but its applicability is presently limited to anterior lesions smaller than 8−10 mm. ***(Allan et al., 2007)***