THE ROLE OF RADIOTHERAPY IN MANAGEMENT OF CANCER OF OROPHARYNX

ESSAY

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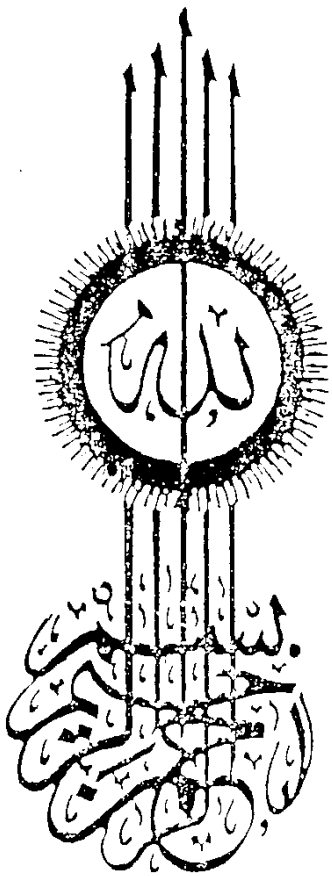

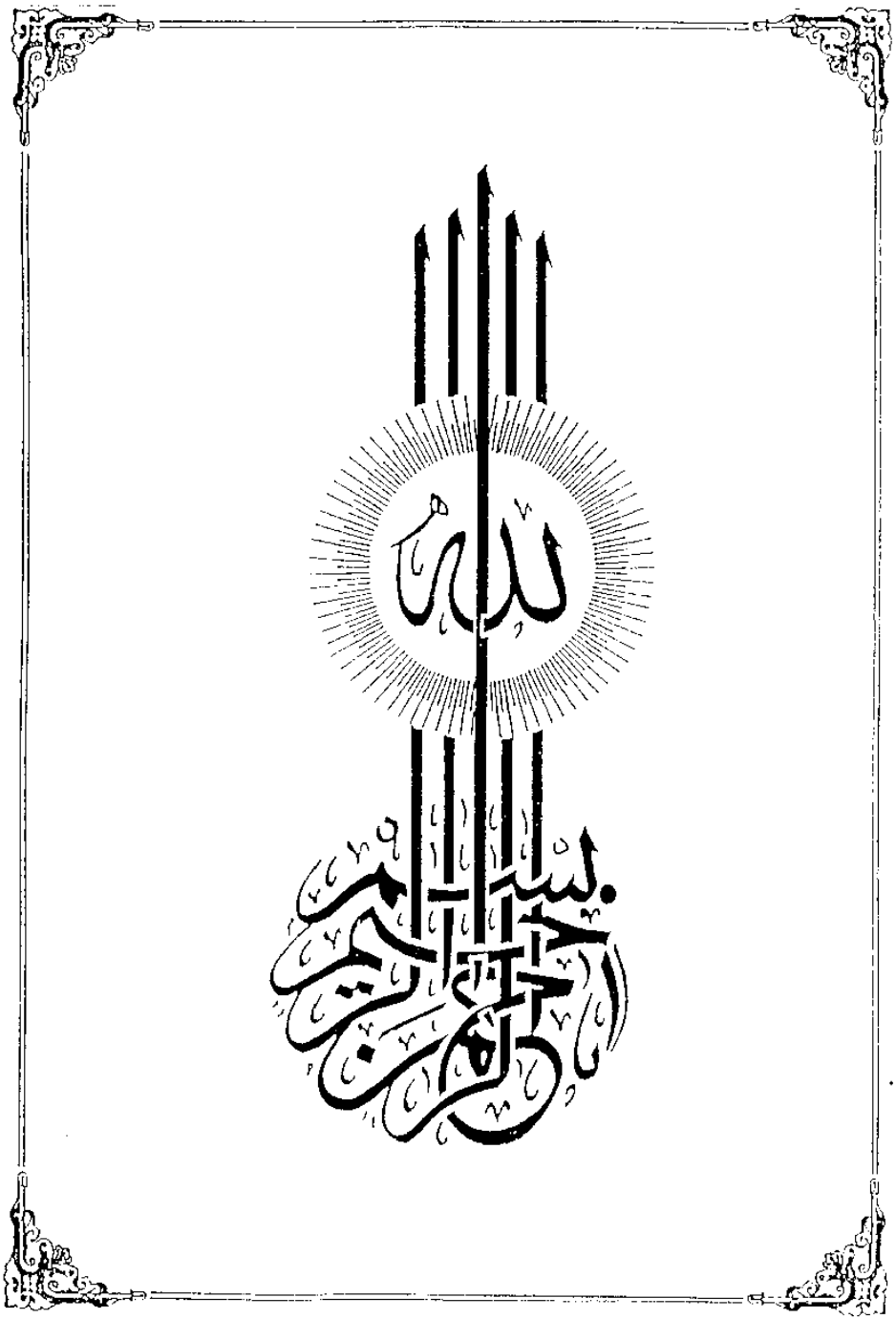

TO MY FAMILY

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LIST OF ABBREVIATIONS

AF	Accelerated Fractionation
AJCC	American Joint Comittee Against Cancer.
ASRO & NMD	AinShams Radiation Oncology and Nuclear Medicine Department
BSO	Buthionine Sulfoxamine
C	Initial Activity of the Isotope
CDDP	Cisplatinum
cGy	certy Gray
CHART	Continuous Hyperfractionation Accelerated Radiation Therapy
CO_2	Carbon Dioxide
Co^{60}	$Cobalt^{60}$ Teletherapy
CR	Complete Response
CRMCA	Cancer Registry of the Metropolitan Cairo Area.
CT	Computerized Tomography
DFS	Disease Free Survival
DH	Diffuse Histiocytic
DLPD	Diffuse Lymphocytic Poorly Differentiated
DLWD	Diffuse Lymphocytic Well Differentiated
DM	Diffuse Mixed Lymphocytic and histiocytic
DNA	Deoxyribo-Nucleic Acid.
D 5/0.45 NS	5% Dextrose in 0.45% Normal Saline
DU	Diffuse Undifferentiated.
DXM	Dexamethasone.
Ed	Editor(s)
EGFRs	Epidermal Growth Factor Receptors
EORTC	Uropean Organization for Research on Treatment of Cancer.
f	Correction Factor.
5 FU	5 Fluorouracil.

T	Gamma Ray Constant
Gd-DTPA	Godalinium-Diethylene Triamin Penta-Acetic Acid.
GG	Guided Gutter
GSH	Glutathione
h	Distance
H_E	Equivalent Hourse.
HF	Hyper Fractionation
HLac	Sublines of Human Squamous Carcinoma Cells Resistent to Cisplatin.
HN SCCA	Head and Neck Squamous Cell Carcinoma Antigen.
HVL	Half Value Layer.
I^{125}	Iodine-125
IL-2	Interleukin 2
In-III CEA	Indium-III Labelled Carcino-Embryonic Antigen.
Ir^{192}	Iridum^{-192}.
LASA	Lipid-Associated Sialic Acid.
LSA	Lipid-Bourd Sialic Acid.
M	Number of Milligram hours per 1000 roentgen
mc	Millicurie
MCP	Metaclopromide.
mEq Kcl	milli Equivelant Potassium Chloride.
MeV	Million Electron Valts.
M/F	Male to Female Ratio
MPC	Multiple Primary Cancers.
MRI	Magnetic Resonance Imaging
MV	Megavalts.
NCI	National Cancer Institute
NH	Nodular Histocytic.
NHL	Non Hodgkin's Lymphoma.
NLPD	Nodular Lymphocytic Poorly Differentiated
NLWD	Nodular Lymphocytic Well Differentiated.
NM	Nodular Mixed Lymphocytic and Histocytic.
OC	Oropharyngeal Carcinoma.
ORs	Odd Ratios.

PBH	Protein-Baurd Hexoses
PC	Precancerous Lesions
Pt	Platinum
PT	Plastic Tube.
R	Roentgen.
Ra^{226}	$Radium^{226}$.
RND	Radical Neck Dissection
RR	Relative Risk
SEER	Survillance Epidemiology and End Results.
SIADH	Syndrome of Inappropriate Antidiuretic Horone.
SPECT	Single Photon Emission Computerized Tomography.
SSD	Source Surface Distance.
T	Half Life.
TABE	Tumour-Associated Blood Eosinophilia.
TATE	Tumour-Associated Tissue Eosinophilia.
Tc^{99m} DMSA	$Technetium^{99m}$ Dimercaptosuccinic Acid.
TNM	Tumour Node Metastasis.
TSA	Total Sialic Acid.
UICC	International Union Against Cancer.
UIHC	University of Iowa Hospital and Clinics.
V	Volume.
VRP	Verapamil
WHO	World Health Organization.
WR	Waldeyer's Ring.

INTRODUCTION AND AIM OF WORK

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The oropharynx includes four areas: the base of the tongue, the tonsillar region (tonsillar fossae and tonsillar pillars), the soft palate, and the portion of the pharyngeal wall between the pharyngoepiglottic fold and the nasopharynx (Million et al., 1989).

Oropharyngeal carcinoma constitutes about 9 % of head and neck cancers and about 0.3% of all cancer cases (Ibrahim, 1992 and Sherif and Ibrahim, 1987).

The etiology of oropharyngeal tumors is not precisely known, however several factors including genetic susceptibility, viruses and ionising radiation are incriminated (Gluckman and Thompson, 1989).

Early detection of oropharyngeal tumors with serum glucoconjugates tumor markers and radionuclide imaging are now used with high sensitivity and specifity (Watkinson et al., 1987 and Bina et al., 1991).

For many years radiotherapy for oropharyngeal cancers was regarded as the treatment of choice. The poor prognosis seems related to the inaccessability of the area of examination and early cervical lymph node metastasis. Now

surgery or radiotherapy is used effectively for small limited cancers (T1 and T2 lesions), while combined therapy (surgery and radiotherapy with or without chemotherapy) is planned for more advanced lesions (T3 and T4) and for tumors of some areas, for example, the base of the tongue (Gluckman and Thompson, 1989).

Many radiotherapists continue to offer radiation therapy as the primary mode of therapy for tumors of the tonsil as well as the regional lymphatics (Perez, 1992).

Multimodality approach of preoperative chemotherapy (methotrexate with leucovorin rescue, cisplatinum and bleomycin) followed by radiation therapy and surgery appears to offer a better survival and a promising approach in stage III and IV oropharyngeal tumors (Zidan and Kuten, 1987).

In recent studies chemotherapy using cisplatinum, continuous infusion of 5-fluorouracil and high dose leucovorin is proved to be effective in patients of recurrent or newly diagnosed metastatic squamous cell carcinoma (Al Saraf, 1988).

Hyperfractionation for T2, T3 and T4 cancers of the

oropharynx gives a better local control and prolonged survival than the continuous course with once-a-day irradiation (Parsons et al., 1988).

Brachytherapy with removable or permanent implants, is site specific and an effective treatment modality for advanced and recurrent oropharyngeal tumors (Wang, 1990).

AIM OF THE WORK:

The current essay will review the epidemiology, clinicopathological classification, management, prognosis and end results of treatment of oropharyngeal carcinoma.

Different fractionation schedules of radiation therapy and recent advances in brachytherapy will be discussed.

REVIEW OF LITERATURE