CURRENT MANAGEMENT OF PROLACTIN SECRETING ADENOMAS

Thesis

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Submitted By
Ahmed Sayed Ahmed Mohamad
(M.B.,B.Ch.;M.Sc.)

Under Supervision of
PROF. DR. MOSTAFA MOHAMED WAGIH KOTB
Professor of Neurosurgery,
Faculty of Medicine, Cairo University

PROF. DR. AHMED AMR TAHER
Professor of Neurosurgery,
faculty of Medicine
Cairo University

PROF. DR. IBRAHIM MOHAMED IBRAHIM
Professor of Neurosurgery
Faculty of Medicine
Cairo University

DR. HISHAM MOHAMED HOZYEN
Assistant Professor of Neurosurgery
Faculty of Medicine
Cairo University

Faculty of Medicine
Cairo University
2010

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ABSTRACT

The Prolactinoma is the most common pituitary tumor, accounting for 30% of all pituitary adenomas encountered in clinical practice. From a practical standpoint, Prolactinomas can be viewed as having one of the following biologic profiles : Microadenomas, Macroadenoma and Aggressive phenotype.

The clinical features of prolactin secreting pituitary adenomas are related to the endocinological consequences of sustained hyperprolactinemia and the neurological sequelae of an expansible sellar mass. In females, Menstrual dysfunction, and Galactorrhea. In Males and post menopausal females the presentation is mainly due to mass effect, **loss of libido and erectile dysfunction occur in the former.**

40 cases with proloactin-secreting adenome, (Prolactinoma) were managed as follow, 6 cases with micro adenomas underwent surgery via. trans-sphenoidal approach 2 cases presented with apoplexy failed to improve on medical treatment & underwent surgery.

The Remaining 32 cases were subjected to medical treatment using dopamine agonists, six was failed to respond or were intolerant &underwent surgery. Twenty six cases improved on medical treatment.

First line of therapy with dopamine agonists is effective in normalizing hyperprolactinemia and shrinking tumour size. Resection is indicated in patients who can't tolerate medical therapy or in whom it fails. Surgery should also be considered in patients with micro prolactinomas when complete tumor removal with biochemical cure in an expected outcome. Apoplexy still a neurosurgical emergency needs urgent trans-sphenoidal decompression.

Keywords:

- Prolactinoma
- Transphenoid
- Apoplexy
- Dopamine agonists.

LIST OF ABBREVIATIONS

A 1	first part of the anterior cerebral artery
ACA	anterior cerebral artery
A-COM	anterior communicating artery
ACTH	adrenocortieotropic hormone
ADH	anti diuretic hormone
CRH	corticotrophin releasing hormone
CSF	cerebrospinal fluid
CT	computerized tomography
DDAVP	desmopressin
FSH	follicle stimulating hormone
GH	growth hormone
GHRH	growth hormone releasing hormone
GNRH	gonadotrophin releasing hormone
ICA	internal carotid artery
LH	leuteinizing hormone
MRI	magnetic resonance imaging
MSH	melanocyte stimulating hormone
PRL	Prolactin
T1W1	T1 weighted image
T2W1	T2 weighted image
T3	Tri iodeothyronine
T4	Thyroxin
TSH	Thyroid stimulating hormone

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INTRODUCTION

Introduction

Pituitary tumors are common lesions, believed to account for 10%-15% of all primary brain tumors.

The Prolactinoma is the most common pituitary tumor, accounting for 30% of all pituitary adenomas encountered in clinical practice. From a practical standpoint, Prolactinomas can be viewed as having one of the following biologic profiles:

A) Microadenomas.

B) Macroadenoma.

c) Aggressive phenotype.

first two entities are well defined; with little growth potential over time appear quite amenable to gross total excision. The other appears far more subject to aggressive invasive and recurrent-local growth.

The clinical features of prolactin secreting pituitary adenomas are related to the endocinological consequences of sustained hyperprolactinemia and the neurological sequelae of an expansible sellar mass. In females during the reproductive period, the symptoms include, hypogonadism because increased PRL affects the pulsitile secretory activity of GnRH, Menstrual dysfunction, and Galactorrhea. In Males and post menopausal females the presentation is mainly due to mass effect,loss of libido and erectile dysfunction occur in the former.

The patients are evaluated regarding the serum PRL level, normally less than 20 ng/ml. serum level of more than 200 ng/ml is almost always present in cases of prolactin secreting adenomas. The elevation of the PRL level is caused by either a pure prolactin secreting adenomas or a mixed pituitary adenoma with lactotrophic component. The serum level of more than 1000 ng/ml indicates an Invasive Prolactinoma.

The diagnosis is secured by radiographic evidence of pituitary lesion with an elevation of serum prolactin. High field, thin section MRI is a sensitive imaging method for preoperative localization of pituitary adenomas, in addition local invasion of the tumor into adjacent cavernous sinuses and skull base.

Therapeutic options for management of prolactinomas include pharmacological control, surgical resection, and radiation therapy (Conformal radiotherapy, Gamma knife). Each of these treatment modalities has been subjected to comprehensive study. Factors such as tumor size, degree of hyperprolactinemia, clinical presentation, patient tolerance afford the treating physician some latitude in selecting the appropriate therapeutic strategies, particularly from the standpoint of medical versus surgical therapy**.**

Medical treatment is the first treatment modality and surgery is for selected cases.

Aim of the Work

- Review of literature in recent publications regarding pituitary prolactin secreting adenomas.
- Follow up of all patients with prolactin secreting adenomas following each of both treatment modalities and to compare results of management.
- To confirm an algorithm in management of prolactin secreting adenomas according to specific selection criteria.

ANATOMY