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شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

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شبكة المعلومات الجامعية

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التوثيق الالكتروني والميكروفيلم

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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

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بالرسالة صفحات لم ترد بالأصل

Surgical Aspects of Suprarenal Tumours

(ESSAY)

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To

My Family

(My Mother, My Father, My Brother)

and

My Wife

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List of Abbreviations

5-FU	5 Fluoro Uracil.
17 KS	17 Keto Steroid.
17-OHCS	17-Hlydroxy Corticosteroid.
A II	Angiotensin II.
ACE	Angiotensin Converting Enzyme.
ACTH	Adreno Cortico Trophic Hormone.
ADH	Anti Diuretic Hormone.
ANF	Atrial Natruretic Factor.
APA	Aldosterone Producing Adenoma.
APUD	Amine Precursor Uptake & Decarboxylation.
cAMP	Cyclic Adenosine Monophosphate.
CBG	Cortisol Binding Globulin.
COMT	Catechol-O-Methyl Transferase.
CRH	Corticotropin-Releasing Hormone.
CT	Computerized Tomography.
DHEA	Dehydroepiandrosterone.
DHEAS	Dehydroepiandrosterone Sulfate.
DNA	Deoxy Ribonucleic Acid.
DNES	Diffuse Neuro-Endocrine System.
DOPA	Dilydroxy Phenylalanine.
EGF	Epidermal Growth Factor.
EGFr	Epidermal Growth Factor Receptor.
g	Gram.
GABA	Gamma-Amino Butyric Acid.
GH-RF	Growth Hormone Releasing Factor.
GIT	Gastro Intestinal Tract.
GN	Ganglioneuroma.
GNB	Ganglioneuroblastoma.
GSH	Glucocorticoid-Suppressible Hyperaldosteronsim.
HPF	High Power Field.
HVA	Homo Vanillic Acid.
IAH	Idiopathic Adrenocortical Hyperplasia.
IGF-I	Insulin like Growth Factor-I.
IRMA	Immuno Radio Metric Assay.
IVC	Inferior Vena Cava.
K	Potassium.
KI	Potassium Iodide.
LOH	Loss Of Heterozygosity.
MAO	Mono Amine Oxidase.
MEN	Multiple Endocrine Neoplasia.
MEN-I	Multiple Endocrine Neoplasia type I.
MEN-II	Multiple Endocrine Neoplasia type II.
MIBG	Meta Iodo-Benzyl-Guanedine.
MKI	Mitosis Karyorrhexis Index.
MR	Mitotic Rate.
MRI	Magnetic Resonance Imaging.
MSH	Melanocyte-Stimulating Hormone.
MTC	Medullary Thyroid Carcinoma.
Na-	Sodium.
NB	Neuroblastoma.
NP-59	^{131}I-6-β-iodomethyl-19-norcholesterol.
NSE	Neuron Specific Enolase.
O, P'-DDD	[1,1 dichloro-2-(O-chlorophenyl)-2-(P-chlorophenyle) ethane], [Mitotane]
PNMT	Phenylethanolamine-N-Methyl Transferase.
POMC	Pro-Opio-Melano-Cortin.
PRA	Plasma Renin Activity.
RAAS	Renin-Angiotensin-Aldosterone-System.
RNA	Ribo Nucleic Acid.
SIADH	Syndrome of Inappropriate Anti Diuretic Hormone.
SIF	Small Intensely Flourescent cells.
SP-NB	Stroma Poor Neuroblastoma.
SR-NB	Stroma Rich Neuroblastoma.
TPF	Tumour Proliferation Fraction.
TSH	Thyroid Stimulating Hormone.
UFC	Urinary Free Cortisol.
VIP	Vasoactive Intestinal Peptide.
VMA	Vanillyl Mandelic Acid.

Introduction

The incidence of adrenal tumours is much lower than that of other tumours in humans, nevertheless, the rarity of these tumours should not belie their clinical significance because of their particular location and their particular endocrine effects. Correctly diagnosed and properly treated, most adrenal tumours are curable ; misdiagnosed or improperly managed, they can be fatal. With recent advances in imaging techniques and new methods of hormone determination, not only can the diagnosis of adrenal masses be accurate in patients with endocrine symptoms, but several "adrenal incidentalomas" may also be detected in patients with no symptoms. However dilemmas and controversies remain in the diagnosis and management of adrenal masses particularly incidentalomas *(Xiao et al, 1998).*

Abecassis et al reported the results of autopsy studies in 988 subjects, showing the incidence of unsuspected adenomas in the adrenal gland to be 1.9% *(Abecassis et al., 1985).*

This result agrees with the prevalence rate of 2% for adrenal masses detected incidentally by CT *(Ross and Aron, 1990).*

Classifying adrenal tumours as functional non-functional, based on their hormonal activity, is a significant guideline to the appropriate evaluation and management, although there are varied classifications of tumours in the adrenal gland according to anatomy, histology or pathology *(Xiao et al, 1998).*

Functional adrenal tumours usually present typical symptoms and signs because hormonal secretion is excessive. The diagnosis may be established from the clinical manifestations, hormonal measurements, and imaging in most patients. However such tumours may be overlooked in asymptomatic patients with adrenal masses possessing potential hormone secretion. The possibility of subclinical hormone production in such adrenal tumours is of interest *(Xiao et al, 1998).*

Phaeochromocytomas are the most frequently detected hormone-producing incidentaloma *(Xiao et al, 1998).*

Introduction

In a 50-year autopsy study (40078 autopsies) at the Mayo Clinic, Sutton et al described 41 patients with clinically unsuspected phaeochromocytomas, of whom only 54% had a history of hypertension *(St. John Sutton et al, 1981).*

Pre-Cushing's syndrome and subclinical primary aldosteronism in incidentally discovered adrenal masses have also been reported *(Siren et al, 1993).*

In the asymptomatic patient, the minimal screening for hormonal activity consists of serum potassium level to evaluate aldosteronoma and a determination of urinary levels of VMA and catecholamines to exclude phaeochromocytoma *(Xiao et al, 1998).*

A single dose 1mg overnight dexamethasone supression test is recommended to screen for pre-Cushing's syndrome *(Cronin et al 1990).*

Recently adrenal scanning with ^{131}I-6-β-iodomethyl-19-norcholesterol (NP-59) was suggested to identify adrenal masses, because this compound is taken up by functional adrenal tumours, even in a subclinical level, but not by the suppressed contralateral gland *(Gross et al 1987).*

CT is better than MRI in detecting and localizing adrenal tumours, and MRI is more helpful than CT in distinguishing benign and malignant tumours, by comparing signal intensities and by contrast enhancement with Gadolinium. However, there remains an overlap of 20-30% between benign and malignant masses *(Krestin et al,1991).*

Therefore fine-needle aspiration or core biopsy under U/S or CT guidance has been used to evaluate adrenal masses *(Katz et al, 1984).*

More recently, immunohistochemical staining techniques, chromosome karyotype analysis and gene investigations have been used to differentiate between malignant and benign adrenal masses *(Lin et al,1994).*

Adrenal tumours may be treated surgically or therapeutically ; removing the tumour by surgery is the only curative course. Surgery is principally indicated for functional adrenal tumours regardless of their characteristics ;