

**ROLE OF TECHNETIUM 99-m
PERTECHNETATE IN THYROID SCINTIGRAPHY
TOWARDS THE DIAGNOSIS OF
THYROTOXIC PATIENTS**

Essay

Submitted for the partial fulfillment of
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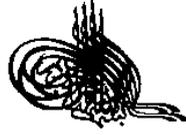
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”قالوا سبحانك لا علم لنا إلا ما
علمتنا إنك أنتم العليم الحكيم“

البقرة آية ٣٢



ABSTRACT

Thyrotoxicosis may be due to diffuse thyroid disorder such as Grave's disease and subacute thyroiditis, or due to focal lesions such as single toxic adenoma or multiple functioning adenomas (Plummer's disease).

Tc-99m pertechnetate scan plays an essential and leading role for establishing the diagnosis. It is capable for differentiating Grave's disease from thyroiditis, unlike ultrasound which gives similar findings. In nodular disease, the scan reveals the functioning nature of the adenoma and reflects the degree of thyrotoxicity through the elevation of the thyroid uptake.

**TO My Parents
Husband
&
Lovely Daughter**

ACKNOWLEDGMENT

Thanks first and last to GOD as we owe him for his great care, support and guidance in every step in our life.

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Sherine

LIST OF ABBREVIATIONS

%	Per cent
°C	Degree centigrade
μCi	Micro Curie
μg	Microgram
(A)	
AMP	Adenosine mono phosphate
Anti-TPO	Antithyroid peroxidase
APUD	Amine precursor uptake and decarboxylation
(B)	
BMR	Basal metabolic rate
(C)	
cm	Centimeter
(D)	
d	Day
dl	Deciliter
(E)	
ESR	Erythrocyte sedimentation rate
(G)	
g	Gram
(H)	
h	Hour
(I)	
I-131	Iodine-131
IM	Intramuscular
IVU	Intravenous urography
(K)	
KeV	Kilo electron volt
(L)	
LAO	Left anterior oblique

(M)	
mg	Milligram
mm	Millimeter
mrad/mCi	Millirad/millicurie
mU/L	Milliunit per liter

(N)	
NaI	Sodium iodide
ng	Nanogram
nmol/L	Nanomol per liter

(O)	
O/E	On examination

(R)	
RAIU	Radioactive iodine uptake
RAO	Right anterior oblique
RIAs	Radioimmunoassays

(S)	
SSN	Suprasternal notch

(T)	
T₃	Triiodothyronine
T₄	Tetraiodothyronine or thyroxine
TBG	Thyroid binding globulin
TBII	TSH-binding inhibitory immunoglobulins
Tc-99m	Technetium – 99 metastable
Tc-99m-MIBI	Technetium 99m-methoxy isobutyl isonitrile
TCO₄⁻	Pertechnetate
TPO	Thyroid peroxidase
TRH	Thyrotropin releasing hormone
TSAb	Thyroid-stimulating antibodies
TSH	Thyroid stimulating hormone
TSI	Thyroid-stimulating immunoglobulins

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