IMAGING OF PROSTATIC LESIONS

Essay

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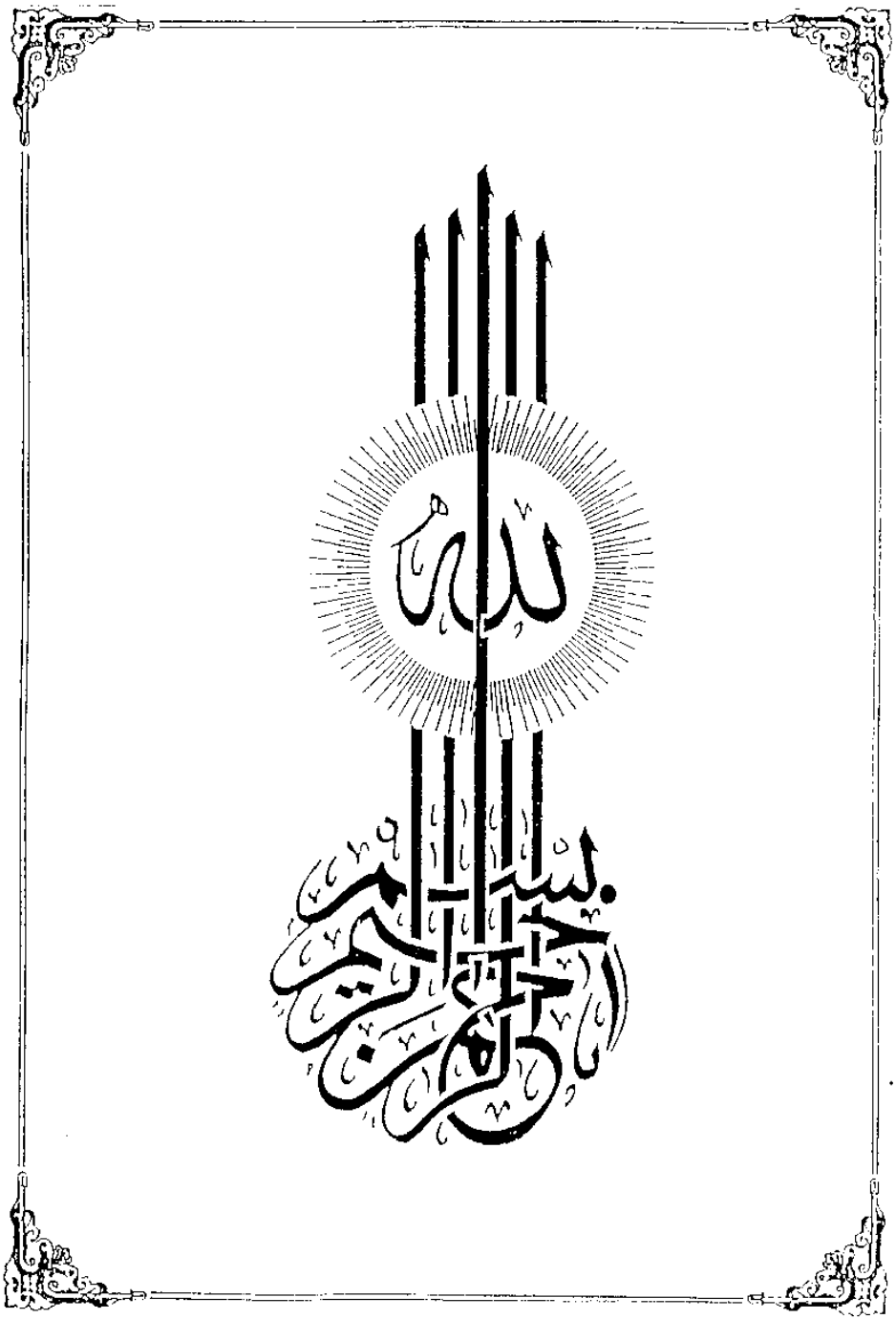

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INTRODUCTION AND AIM OF WORK

The prostate is an important organ in the male urogenital system. The prostate gland is the most frequently diseased organ in men. Space occupying lesions are the most common lesions in men over the age of sixty five years *(Mc Clennan, 1990)*.

Although digital rectal examination has been the primary method for evaluating these lesions, its limitations in both detection and staging are well recognized *(Hernandez, 1990)*.

We have reviewed the different radiological and imaging techniques in cases of different prostatic lesions. Starting by the conventional radiological methods, the imaging techniques of ultrasonography and scintigraphy, up to the recent imaging modalities of C. T. and M.R.I.

The aim of our work was to demonstrate the efficiency of each diagnostic modality in the diagnosis of different prostatic lesions.

ANATOMY

ANATOMY OF THE PROSTATE

The prostate is a fibromascular and glandular organ surrounding the male urthra.

The prostate is some what conical in shape possesses the following landmarks; base, apex, posterior surface, anterior surface, and two lateral surfaces.

The posterior base measurs about 4 cm transversally, the gland being about 2 cm in anteroposterior and 3 cm in its vertical diameters *(Wiliams et al., 1989)*.

Lobes of The Prostate

Former classification divided the prostatic gland into five lobes, anterior, posterior, median, and two lateral lobes *(Tanagko 1986)*.

Mc Clennan divided the gland elements into 4 prostatic zones:

1. The transition zone:

It is a thin zone surrouning the periurthral gland. It accounts for approximatly 5% of the volume of the normal prostate and it is the zone in which benign prostatic hyperplasia orginates.

2. The central Zone (CZ)

It constitutes 25 % of normal sized prostate by volume. It is thick at the base and thin near the Apex.

3. The peripheral zone (Pz)

It is surrounds the CZ and is correspondingly thinner at the base and most doninant at the caudal portion of the gland (apex).It constitutes 70% of normal glandular prostate and contains less density packed stroma and more glandular acinni than does the CZ. The peripheral zone is the site of most prostatic cancers.

4. The anterior fibromuscular stroma:

It forms the anterior boundary of the TZ and covers the anterio surface of the prostate *(Ramchandani and pollack, 1992)*.

Ligaments and attachments:

The prostate is well fixed in its place. Its place rests on the superior aspect of the genito-urinary diaphragm and is attached to the back of the pubic bone by thee dense a vascular pubo-prostatic ligament. It is firmly adherent to the base of the bladder superiorly. And confind within the prostatic sheath which is a reflection from the endopelvic fascia. It is well supported posteriorly by the obliterated peritonial pouch forming the fascia of Denonvillier's *(Tanagho, 1986)*.

Anatomical Relations

- The prostate gland is situated in the true pelvis behind the inferior border of symphysis pubis and the pubic arch lying infront of ampulla of the rectum.