PROSTATIC ABSCESS

Essay

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(UROLOGY)

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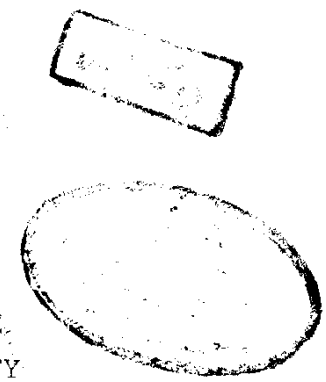

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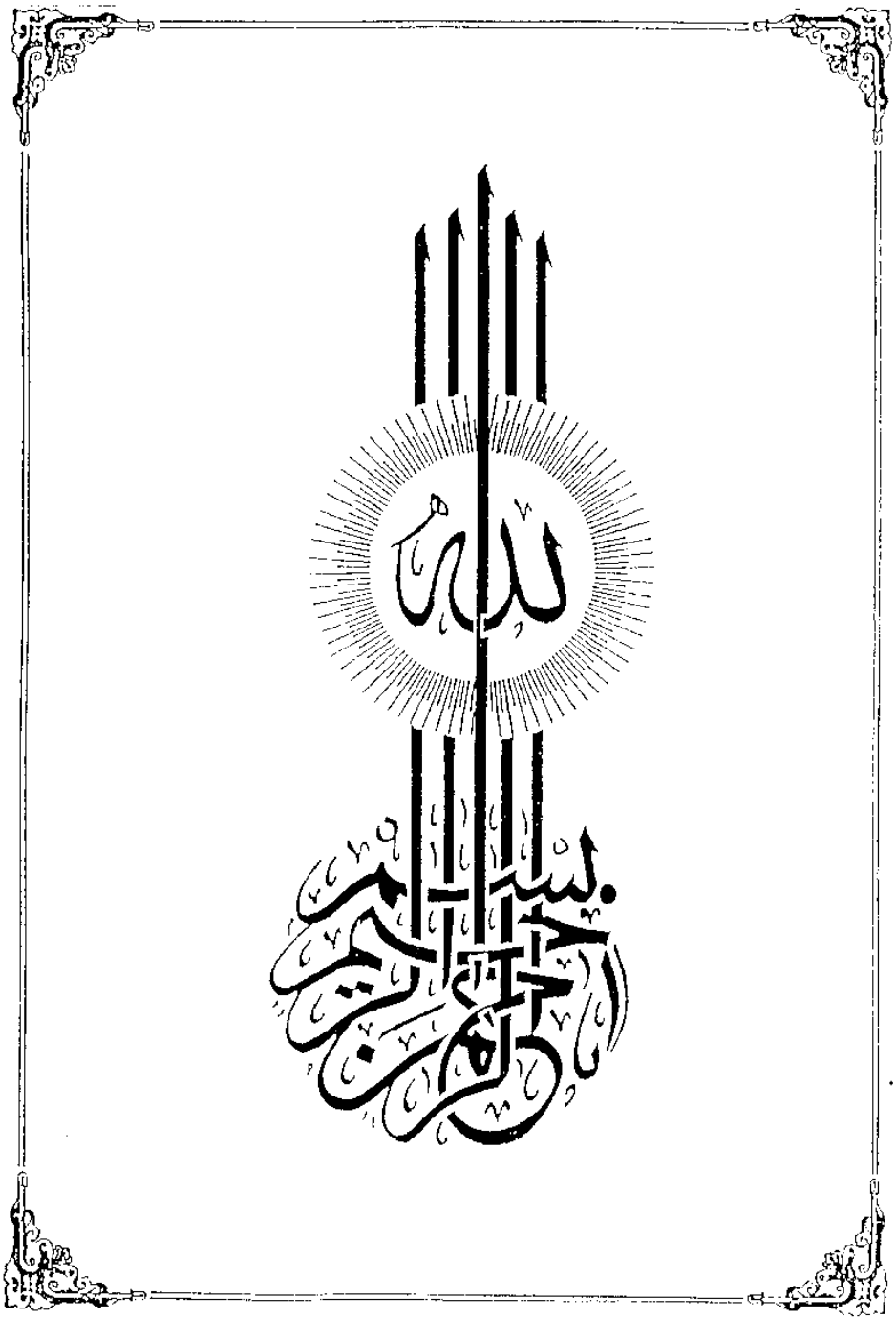

TO MY PARENTS WHO SUFFERED

A LOT AND GAINED NOTHING

CONTENTS

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INTRODUCTION

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The aim of this work is to throw some lights on the nature and behaviour of one of the diseases of the prostate which is one of the gentiourinary organs.

The inflammation of this gland in general has been reported for being so common in all ages of life and more frequently in adult individuals.

Abscess of the prostate respresents a problem for both patient and doctor as it is always missed perhaps due to its symptoms extra and intraurinary manifestation, neglection of rectal examination to many patients or due to previous treatment by general practioner doctors.

The result of late diagnosis or missed diagnosis will lead to complications, resistancy and chronicity of the abscess which is more difficult to eradicate.

Early diagnosis and proper treatment of the disease, prophylaxis and prevention of the predisposing factors will give a good prognosis and we must take in mind that the presenting symptoms of the disease may be widely different.

The main line of treatment is surigcal interference while the role of antibiotic therapy is unsettled until now, as most of them failed to penetrate the prostatic barrier.

Recent studies detect that anatomical and histological factors play an important role in prostatic infection shortly, the diagnosis and treatment of prostatic abscess inspite of misleading symptoms is so important for prevention of the complications and for preservation of the function of the prostate.

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ANATOMICAL AND HISTOLOGICAL CONSIDERATIONS IN RELATION TO PROSTATIC INFECTION

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Anatomical and histological considerations of the prostate in relation to its infection include :

1- Surgical anatomy of the prostate.

2- Anatomical basis for the aetiology and pathological findings.

3- Sphencteric mechanism of the urethra as contributing factor of aetiology and pathology of prostatic infection.

It divides the sexual function in relation to prostatic infection in 3 phases :

a- Pre-ejaculatory phase.

b- Intrinsic ejaculartory phase.

c- Extrinsic ejaculatory phase.

1- Surgical anatomy of the prostate :-

The normal prostate gland is placed, like a doughnut, around the urethra as it emerges from the male bladder. It lies behind the symphysis pubis to which it is attached by a tough fascia containing large veins. On either sides, the pubis and the ischium curve around it. Behind the prostate lies the rectum, separated by the "fire resisting" layers of Denonviller's fascia (made up of two layers of peritoneum fused together). In the groove between the prostate and the bladder posteriorly lie the seminal vesicles, vasa, and entery of the ureters.

The prostate is really, like most secretory glands, a mass of tubes, surrounded by a capsule of muscle. Each tube is supplied with a contractile sleeve of muscle, and the whole is supported by a stroma of connective tissue. Histologically the three elements of the supproting connective tissue, the smooth muscle and the tubules and secretory acini of the glands form a characteristic

picture which changes during the different phases of the growth and development of the male. So the glandular and muscular elements are hardly detectable in the child, they hypertrophy with puberty, and then in middle age they begin to develop the nodules and whorls of benign hypertrophy.

The glandular ducts of the prostate run more or less radially out from the prostatic urethra into which they empty. On endoscopy one can easily see their openings in the prostatic urethra. But the chief land mark in the prostatic urethra is the verumontanum which as its name implies, lies like a mountainous island in the middle of the posterior urethral wall. On either sides of the veromentanum there are two important openings, the ejaculatory ducts, which run obliquely down through the back of the prostate (Ansell, 1976; Williams and Chishom, (eds.), 1976).

Surgically we recognize lobular divisions which surround the urethra so that, looking from

within the urethra, five divisions can be discerned. These are the anterior, middle or median, posterior, and two lateral lobes. These Surgeon's divisions are most obvious in those prostate glands that undergone significant hypertrophy.

The new concept of the anatomy of the prostate and its correlation to diseases inflammatory, neoplastic and hyperplastic is generated by McNeal, (1968, 1972) and Black-Lock (1974).

The part of the true prostate which lies above the level of the verumontanum is separated from the urethra by what McNeal has termed the pre-prostatic sphincter, a downward continuation into the urethra of the deep trigone and internal sphencter. Only the lower prostate distal to the verumontanum is directly continuous with the peri-urethral tissues.

So infection of the true prostate may therefore occur without concomitant inflammatory changes in the prostatic urethra as seen in endoscopic photographs.

2- Anatomical basis for the aetiology and pathological findings :-

McNeal (1972) has subdivided the true prostate into a central and peripheral zone on the basis of histological differences in the ducts, the stroma and the epithelium . He identified the central zone as a wedge of glandular tissue of variable size which surrounded the ejaculatory ducts, having its apex at the verumontanum and its base superiorly behing the bladder neck. Its acini formed much of the base of the prostate.

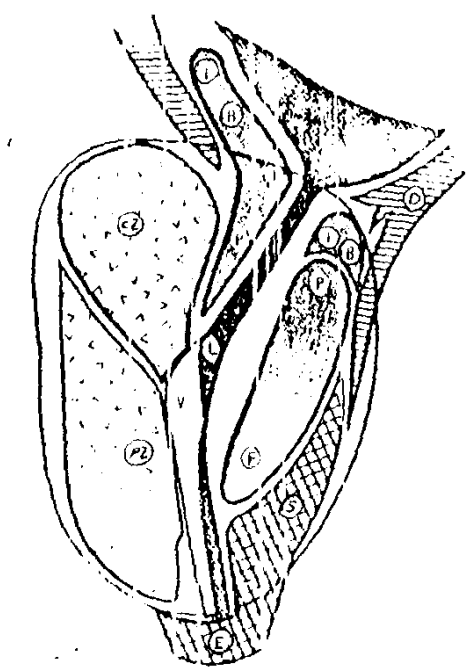

Fig. (1) :-
Composite of prostate. Sagittal section shows anatomical subdivision as defined by McNeal. Key : CZ central zone. PZ, peripheral zone. V, verumontanum. L, urethral lumen. D, detrusor, I, internal sphencter. P, preprostatic sphincter, S, prostatic sphincter. F, fibrous preprostatic sphincter, and E, external sphencter.

The peripheral zone made up of the remainder of the glandular tissue surrounding most of the central zone with the exception of its upper most part. The central zone represents about less than one third of the total gland mass.

Difference between two zones which corresponding with McNeal (1968) description is apparent on gross section in the sagittal and coronal planes. In the central zone the branching of the duct system was more elaborated and sacculation of acini is large and rectangular on cross section.The intra-luminal partitions more prominent and the lining epithelium exuberant. In the peripheral zone there was a simpler form of duct branching with smaller and round acini. The lining epithelium was more regular, the cells being small and pale on staining compared with those of the central zone.

In 40 cases of prostatic infection reported by McNeal, inflammatory changes was confined to the