

INFLAMMATORY INTRASCROTAL SWELLINGS

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THESIS

Submitted in Partial Fulfilment
for the Master Degree of Urology

BY

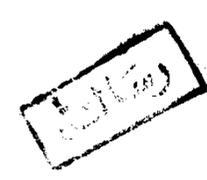
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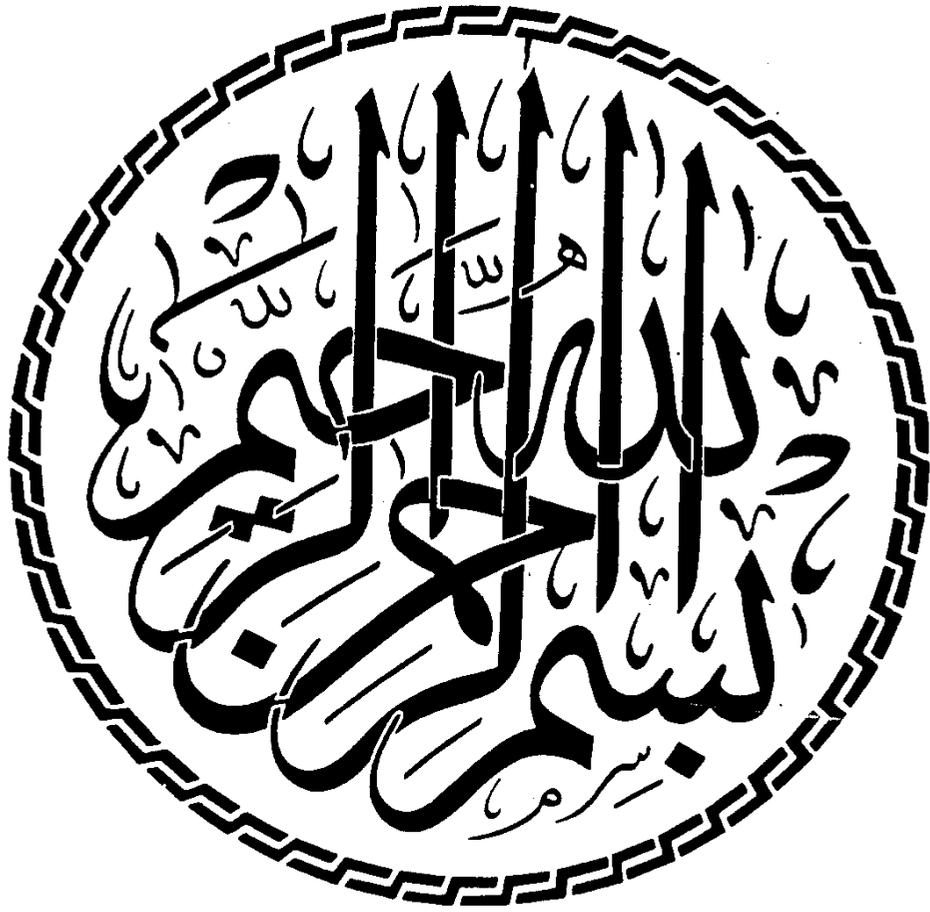
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9

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To my father

and

To honest and sincere men who silently and intellectually devoted themselves to the welfare of my country.

PREFACE

I wish to express my sincere gratitude and deep appreciation to Prof/Dr.MOHAMED AMIN TAHA Prof.of urology in urology department, faculty of medicine AIN SHAMS UNIVERSITY for his kind approval to register the subject of this essay, also in planning and supervising this work and his great help to write this essay in its possible form.

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INTRODUCTION

Intra-scrotal swellings are one of the common complaints that meet urologists, urologic residents as well as physicians in other medical branches.

They are studied in terms of anatomy, pathology & management. On the other hand, patient speaks in terms of pain, fever, swelling...etc. So it is essential to translate the patients complaint and the detected physical signs into a clinical diagnosis.

"I can't make bricks without clay".....The copper beaches, Sir Arthur Conan Doyle.

This work is intended to guide the medical personnel towards eliciting differential physical signs and the interpretation of the results of investigation and to make a correct clinical diagnosis to start the proper treatment.

CONTENTS

	<u>Page</u>
CHAPTER I :	
Surgical Anatomy of the scrotum.....	1
CHAPTER II :	
Aetiology & Pathology of inflammatory intrascrotal swellings.....	8
CHAPTER III:	
Diagnosis of inflammatory intra-scrotal swellings.....	43
- Clinical Picture.....	43
- History & Examination.....	49
- Investigations.....	53
CHAPTER IV :	
Treatment of inflammatory intrascrotal swellings.....	62
SUMMARY.....	81
REFERENCES.....	84
ARABIC SUMMARY.....	

LIST OF FIGURES

	<u>After Page</u>
Fig. 1 : Testis and associated structures.....	3
Fig. 2 : Reflux of urine through left vas to epididymis.....	14
Fig. 3 : Effect of constrictive funiculo-epididymitis.....	14
Fig. 4 : Paletan cut surface of testis and epididymis replaced by caseous necrosis..	
Fig. 5 : Pathogenesis of tuberculous disease of genito urinary tract.....	19

ULTRASONOGRAPHY

Fig. 6 : Diagram to illustrate the principle of the UI octoson water-path ultrasound scanner.....	55
Fig. 7 : Normal Testicular architecture.....	55
Fig. 8 : Bilateral chronic epididymitis with a 7-year history.....	56
Fig. 9 : Transverse & Longitudinal scans in a patient with right Sided granulomatous orchitis.....	56

RADIONUCLIDE ANGIOGRAPHY

Fig.10 : Testicular Abscess.....	58
Fig.11 : Epididymo orchitis.....	58

SURGICAL PROCEDURES

Fig.12 : Site of vas ligation.....	65
Fig.13 : Technique of epididymotomy.....	65

***REVIEW
OF
LITERATURE***

CHAPTER I:

SURGICAL ANATOMY OF THE SCROTUM

SURGICAL ANATOMY OF THE SCROTUM

The scrotum is a contractile cutaneous pouch containing the testes, epididymides and the inferior part of the spermatic cords. It has a bilateral origin; the left and right scrotum are fused together in the midline forming the median raphe. This septum divides the scrotal cavity into two compartments. The scrotal wall consists of skin, muscle, and connective tissue.

The skin of the scrotum is thin and elastic and usually lies in folds. It is deeply pigmented and contains many sebaceous glands and hair follicles. Immediately beneath the skin is the dartos tunic, a thin layer of involuntary muscle and connective tissue that contracts with cold and relaxes with heat. It is supplied with sympathetic nerve fibres. Anteriorly it is continuous with the superficial fascia of the abdominal wall; laterally it is attached to ischiopubicrami; and posteriorly it is prolonged into the superficial perineal fascia of colles. A layer of loose connective tissue lies between the dartos layer and the deeper layers. The tissue is sufficiently loose to permit the scrotal contents to move about freely in the scrotal cavity. This layer presents a good plane of cleavage when the scrotum

is being approached surgically. It is in this loose layer that extravasations and hematomas from the perineal region accumulate; the layer may spread superiorly under scarpa's fascia and the superficial fascia of abdominal wall.

Besides the above three layers, there are another three complete layers that invest the testis and cord. All of them are derived from the anterior abdominal wall.

- 1- The most superficial is the external spermatic fascia, an extension of the external oblique fascia.
- 2- The middle layer is the cremaster muscle layer, which is derived from internal oblique muscle. By contraction of this layer, the testis is drawn toward external inguinal ring. The cremasteric reflex is produced by the strong contraction of these muscle fibres if the skin of medial thigh is scratched.
- 3- The deepest is internal spermatic fascia, an extension of the transversalis fascia. It is composed of loose connective tissue and closely invests elements of the spermatic cord and testis.

Tunica Vaginalis:

A serous membrane that covers most of testis and epididymis. Developmentally it is derived from the vaginal process of the peritoneum. The remainder of the funicular portion of the process, the vaginal ligament, lies among elements of spermatic cord from the internal inguinal ring to the tunica vaginalis. Like all other serous membranes, it forms a cavity which contains a film of fluid, and it divides the tunica vaginalis into parietal and visceral layers. The parietal layer is closely adherent to the internal spermatic fascia. It reflects forward at the posterior wall of the scrotum and becomes continuous with the visceral layer, which is closely adherent to tunica albuginea, the fibrous covering of the testis and epididymis.

Structure of the testis: (Fig. (1)).

The testis is a paired oval glandular organ, which lies in either side of scrotal cavity. It is loosely suspended by the spermatic cord and its investing tunic layers. It is also attached to the base of the scrotum by the gubernaculum.

The testis is coated by a pearly white fibrous layer, the tunica albuginea. It becomes thicker at the posterior border, forming the mediastinal testis, from

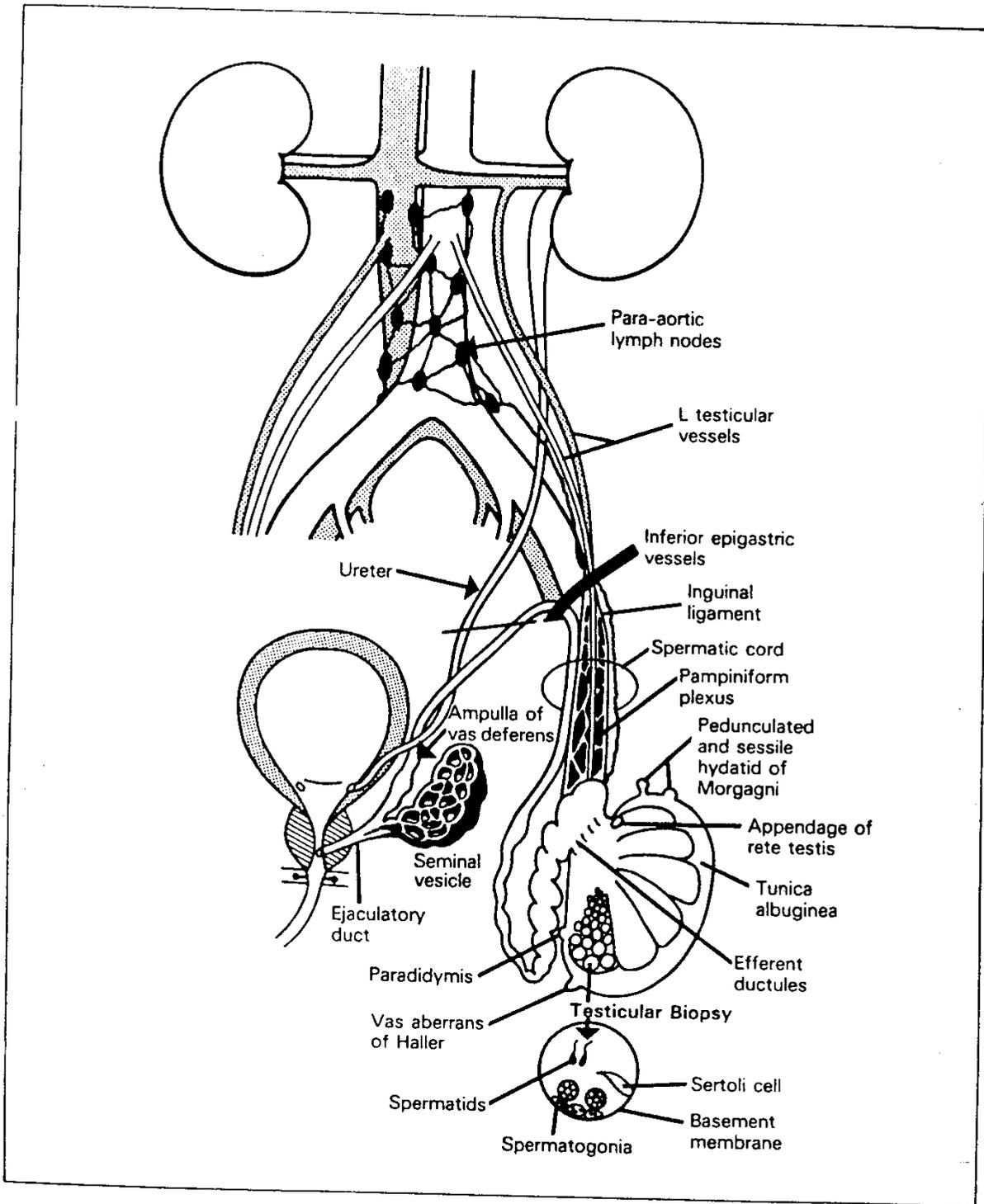


Fig.(1): Testis and associated structures.
 The figure has been reproduced from (Brown 1982).

11

which numerous incomplete fibrous septums pass inward to subdivide the testis into many lobules. Each lobule of the testis is filled with convoluted seminiferous tubules; the proximal end unites with the ends of other lobules to form a network called the rete testis at the mediastinal testis. From this network about 20 efferent ductules arise and enter the head of the epididymis from the upper pole of the testis.

The function of the testis is to produce sperms from the seminiferous tubules and to secrete androgen from the interstitial or leydig cells.

The epididymis:

It is a long narrow body surmounting the posterior border of the testis. It is divided into three parts; head, body and tail. The head of the epididymis is enlarged and attached on the upper pole of the testis. The body is separated from the testis, and the tail is attached to the testis again at its lower end.

The head is composed of efferent ductules, which emerge from the testis. The ductules converge into a convoluted single duct system in the epididymal body, which connects with the vas deferens at the tail. The function of the epididymis is to collect sperms from the

