بسم الله الرحمن الرحيم

شبكة المعلومـــــات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

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SURGICAL MANAGEMENT OF TESTICULAR NEOPLASMS

For partial fulfilment of Master Degree in Urology, Faculty of Medicine Cairo University

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ABSTRACT

- Testicular tumor is a highly treatable often curable Cancer with cure rates exceeding 80%.
- Transcrotal biopsy is always contraindicated.
- Tumor markers play a pivotal role in diagnosis and follow up.
- Orchicetomy is the gold standard therapy e' other modalities as radio-chemotherapy and retroperitoneal lymph node dissection.

Keywords

- Testicular tumors
- CIS
- Diagnosis
- Retroperitoneal lymph node dissection
- Tumor markers
- Prognosis.

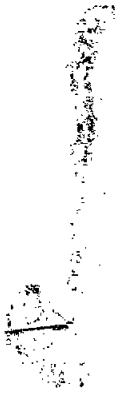

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TABLE OF CONTENTS

CHAPTER (I)
NORMAL ANATOMY OF THE TESTIS

The *normal testis* is composed of numerous lobules (up to 400) divided by septa that converge to form the mediastinum testis. Sonographically, the testes are homogeneous with a medium level echotexture. The mediastinum testis is an elongated brightly echogenic structure extending longitudinally on the posterior lateral side of the testis. The appendix testis and appendix epididymis are sonographically visible only when surrounded by hydrocele fluid *(Stewart and Carroll, 1989)*.

The epididymis has three sections: (1) the head, (2) the body, and (3) the tail. The epididymal head is usually 10 to 12 mm in size and is usually equal to or slightly more echogenic than the testis. The body of the epididymis is sonographically difficult to see because it is small and lies against the testis. Careful scanning, however, shows it as a tubular structure extending inferiorly from the epididymal head. The epididymal tail tail is also difficult to identify in some cases but when seen lies on the inferolateral surface of the testis *(Stewart and Carroll, 1989 and Tanagho, 1986)*.

Vascular Supply of the Scrotum:

The testicular arteries are the major blood supply to the testes parenchyma and have a low-resistance flow pattern similar to other parenchymal organs *(Middleton et al., 1989)*. Supply to the epididymis and other extratesticular structures comes from the deferential (a branch of the internal iliac) and the cremasteric arteries (a branch of the external iliac). The cremasteric and deferential arteries have high-resistance blood flow

patterns similar to the external iliac artery and other muscular arteries *(Middleton et al., 1989).*

The testicular artery divides into branches that form the capsular arteries, which course along the periphery of the testis just deep to the tunica albuginea *(Harrison, 1949; Middleton et al., 1989 and Trainer, 1987).* Multiple centripetal arteries arise from the capsular arteries and flow through the testis arenchyma toward the mediastinum testis. Before reaching the mediastinum, the centripetal arteries branch into multiple smaller recurrent rami, which turn around and flow away from the mediastinum testis and supply the testicular parenchyma *(Harrison, 1949; Kormano and Souranto, 1971; Middleton et al., 1989 and Trainer, 1987).* A large branch of the testicular artery passes through the mediastinum in up to 52% of testes (Harrison and Barclay 1948' Fakhry et al., 1989 and Middleton and Bell, 1993). All the branches of the testicular artery have low-resistance flow patterns with persistent diastolic flow. In most men there is no venous flow detectable within the testis or the epididymis, because the flow velocity in these vessels is too slow to be visible with current Doppler equipment. With the increasing sensitivity of modern equipment, however, this undoubtedly will change.

Blood flow to the epididymis is supplied mainly by the deferential artery. It has a high-resistance flow pattern with very little diastolic flow. Normally, no persistent arterial or venous flow is seen within the epididymis. This too may change with improved CDU technology.