



Australasian  
Society for  
Ultrasound in  
Medicine

# Promoting Excellence In Ultrasound

## **Policies and Statements**

# **D10**

## **Guidelines For The Performance Of Scrotal Ultrasound**

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#### Guidelines For The Performance Of Scrotal Ultrasound

*February 1995, Revised May 2000, Revised July 2008*

Ultrasound examination of the scrotum is valuable in differentiating testicular (usually malignant) from extratesticular (usually benign) masses. Ultrasound is also helpful in the assessment of male infertility, the acute scrotum, scrotal trauma, **chronic pain** and in the management of cryptorchidism.

#### IMAGING TECHNIQUE

It is helpful to palpate any clinically apparent lesion before scanning the patient. Images of both hemiscrota in transverse, sagittal and/or coronal planes should be obtained, together with a transverse scan comparing both testes. The ultrasound findings should be correlated with the clinical findings.

#### EQUIPMENT

High quality high frequency transducers should be used (7MHz to 15MHz range). Pulsed/colour Doppler is essential to assess torsion or epididymo-orchitis.

#### ANATOMICAL EVALUATION

##### TESTIS

- size
- echotexture (compared with contralateral testis)
- capsule
- mediastinum testis (location to assess rotation)
- vascularity
- appendix testis (seen in the presence of a small hydrocoele)

##### EPIDIDYMIS

- assess head, body and tail
- size
- echotexture
- vascularity
- appendix epididymis (occasionally seen if hydrocoele is present)

##### OTHER SCROTAL ANATOMY

- spermatic cord
- tunica vaginalis
- scrotal wall

## **EVALUATION OF INTRATESTICULAR MASSES**

- dimensions
- borders (well defined, irregular, poorly defined)
- calcifications
- cystic, solid or complex
- echogenicity compared with normal testis
- vascularity

## **EVALUATION OF EXTRATESTICULAR MASSES**

- hydrocoele, haematocoele and pyocoele
- varicocele (size and location)
- scrotal hernia
- epididymal lesions (cyst, spermatocele, acute inflammatory mass, granuloma, solid tumours)

## **THE ACUTE SCROTUM**

The differential diagnosis of an acutely painful and swollen scrotum includes torsion of the spermatic cord and testis, torsion of the testicular appendage, epididymitis and/or orchitis.

B-mode ultrasonic findings of acute torsion have been found to be variable and are not specific. Pulsed and colour Doppler are required to help differentiate torsion from epididymo-orchitis.

In the setting of presumed epididymo-orchitis, an abnormality of testicular architecture (with the exception of a simple cyst) should be followed up with ultrasound to ensure an occult testicular tumour is not the underlying cause.



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