

## Ultrasound – Scrotal Evaluation

### **PURPOSE:**

To evaluate the testes, epididymis, and scrotum for abnormalities.

### **SCOPE:**

Applies to all ultrasound scrotal studies performed at:

- All Children's Health Systems of Texas Hospitals and Clinics, Imaging Services (CHST)

### **INDICATIONS:**

- Signs (examples: mass, swelling) or symptoms (example: pain) associated with the scrotum
- Undescended testes
- Evaluate for testicular malignancy in the setting of risk factors or metastatic disease
- Abnormal scrotal findings on other imaging studies
- Evaluate for recurrent disease in the setting of known testicular cancer, lymphoma, leukemia

### **EQUIPMENT:**

Linear array transducer with a frequency range of 18-5 MHz Linear, sector, or curvilinear transducer with a lower frequency range may be required for appropriate penetration and resolution if the scrotum is enlarged.

### **PATIENT PREPARATION:**

A towel and sheet may be used to prep the testicles.

### **EXAMINATION:**

#### **GENERAL GUIDELINES:**

A complete examination includes evaluation of the scrotal wall, entirety of both testes, and epididymis, and other scrotal contents.

#### **EXAM INITIATION: AIDET**

- Introduce yourself to the patient and family
- Verify patient identity using patient name and DOB
- Explain test
- Obtain patient history including symptoms. Enter and store data page
- Place patient in supine position

#### **TECHNICAL CONSIDERATIONS:**

- **Review any prior imaging, making note of abnormalities or other findings requiring further evaluation.**
- Size, echogenicity, and vascularity of each testes and epididymis should be compared to the contralateral side, preferably in the same image (side-by-side transverse view).
- Spectral and color Doppler of the testes is required if testicular torsion is the indication for the exam or if asymmetry of testicular color Doppler flow is seen. Document arterial and venous waveforms within each testis.
- Epididymis is best evaluated from posterior oblique approach. Thickness of the epididymis is measured perpendicular to its long axis.
- Evaluate for torsed appendix testes and any stones.

- Scrotal skin thickness should be measured and compared to the contralateral side. Scrotal wall should be measured from skin surface to inner echogenic layer (tunica vaginalis). No significant probe pressure should be applied, and a thick layer of gel should be used. Color Doppler should also be placed on thickened skin.
- If a palpable abnormality is the indication for the exam, this area should be directly imaged and annotated.
- Additional techniques such as Valsalva maneuver (for hernia or varicocele detection) or upright imaging may be used, as indicated.
- Mobile testes should be documented.
- Varicocele should be documented in grayscale and color Doppler without and with vessel measurement.
- Focal abnormalities should be documented without and with size measurements and color Doppler.
- Cine sweeps of each testis and any focal abnormalities should be provided.
- Full extent of hydrocele should be documented especially if extends into inguinal canal.

**DOCUMENTATION:**

- **Testes**
  - Grayscale:
    - Measurements, longitudinal and AP at the mid-testis; transverse measurement at mid-testis, in sequential or 2-on-1 images should be documented and saved in the report page
  - Longitudinal images (annotated M->L):
    - Far medial
    - Para-medial
    - Midline
    - Para-lateral
    - Far lateral
  - Transverse images (annotated S->I):
    - Superior pole
    - Mid superior
    - Mid
    - Mid inferior
    - Inferior pole
  - Doppler:
    - Transverse side-by-side image of both testes with grayscale and color Doppler
    - Representative longitudinal color Doppler of each testis
    - Arterial spectral Doppler waveform of each testis
    - Venous spectral Doppler waveform of each testis
  - Cine sweep of each testis, longitudinal and transverse if pathology is seen.
- **Epididymis**
  - Grayscale:
    - Longitudinal images:

- Head without and with thickness measurement
  - Body
  - Tail
- Representative color Doppler images
  - Cine sweep of any subtle or equivocal abnormality.
- **Scrotal Wall**
    - Scrotal wall without and with bilateral thickness measurements (side-by-side transverse view) and with color.
  - **Inguinal Canal**
    - Bilateral Longitudinal images with and without doppler
  - **Other Scrotal Contents**
    - If hydrocele is seen:
      - Representative grayscale images, longitudinal and transverse
      - Stationary cine images of mobile debris, if present
    - If varicocele is suspected: (Measurement >.2cm)
      - Grayscale Color Doppler images without and with Valsalva
      - Transverse vessel measurements, inner wall-to-inner wall, without and with Valsalva

For focal abnormalities, images without and with measurements and color Doppler, and cine sweeps should be provided.

**REVISION HISTORY:**

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<b>REVIEW DATE(S):</b>	<b>08/26/2019 2/17/2023</b>		<b>Kylene De Los Santos, RDMS, RVT C. LaQuin Oliver, RDMS</b>
<b>REVISION DATE(S):</b>		<b>Brief Summary</b>	