

PENIS US PROTOCOL

PURPOSE:

- To evaluate the penis for structural and vascular anomalies.

INDICATIONS:

- Evaluation of intactness of the tunica albuginea in the setting of trauma
- Evaluation of palpable abnormalities including fracture, tumor, hematoma & cavernosal herniation
- Evaluation of penile plaques/fibrosis in the setting of Peyronie's disease
- Evaluation of arterial and venous blood flow
- Evaluation of the urethra for diverticula, abscess, stricture and calculi
- We do not perform post pharmacostimulation imaging

EQUIPMENT:

- 6-18 MHz high-resolution small-footprint probe

PATIENT PREPARATION & ASSESSMENT:

- Introduce yourself to the patient.
- Verify patient identity via two patient identifiers (name and date of birth) per hospital policy.
- Explain the examination, its purpose and how long it will take.
- Answer any questions the patient may have regarding the examination.
- Obtain patient history including symptoms, signs, risk factors and other relevant history.

GENERAL GUIDELINES:

- Have the patient lie supine with his legs together.
- Use ample ultrasound gel so as not to compress structures.
- Send the measurements screenshot page if your machine is capable.
- For focal lesions (plaques, masses, hematomas) obtain split-screen images of the lesion without calipers, with calipers and with Color Doppler.
- Optimize equipment gain and display settings with respect to depth, dynamic range and focal zones while imaging vessels.
- Add color Doppler to supplement grayscale images with proper color scale to demonstrate areas of high flow and color aliasing.
- Use power Doppler to validate low flow states or occlusions.
- Set spectral Doppler gains to allow a spectral window and optimized to reduce artifacts.
- Cursor sample size will be small and positioned parallel to the vessel wall and/or direction of blood flow.
- A spectral Doppler angle of 45-60 degrees or less will be used to measure velocities. Note exceptions to these angles on the technologist worksheet.
- Any deviations from the standard protocol and any limitations to the examination should be documented on the technologist worksheet for future reference and for repeatability in follow-up studies.
- Report preliminary critical findings to the referring clinician when appropriate (i.e. immediate medical attention may be warranted) and according to hospital policy.

DOCUMENTATION:

Grayscale

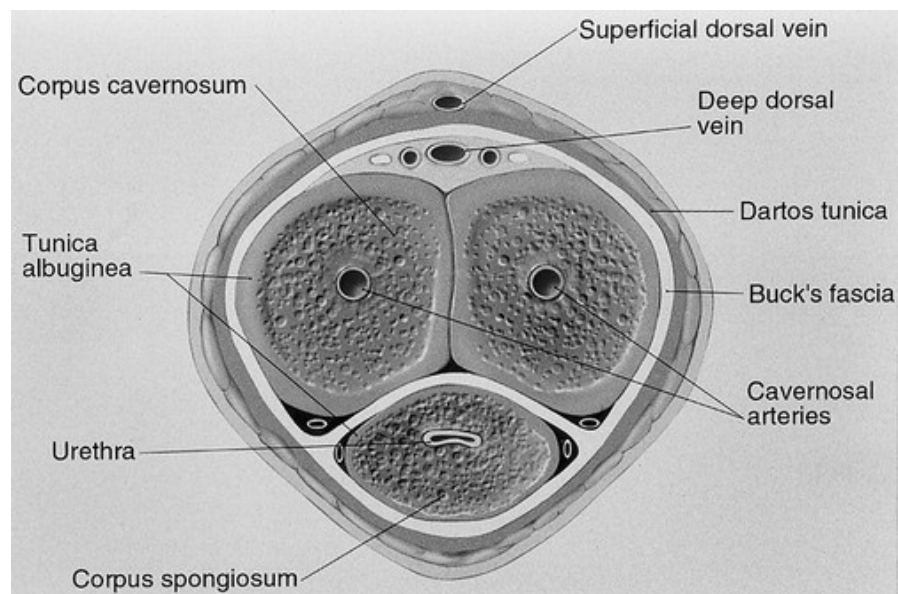
- If machine is capable, obtain a cine clip of the penis in the dorsal transverse plane scanning from base to tip.
- Document dorsal transverse images of the base, mid and tip aspects of the penis.
- Document ventral (urethral) images of the base, mid and tip aspects of the penis.
- Document dorsal longitudinal images through the right corpus cavernosa sweeping lateral to medial.
- Document dorsal longitudinal images through the left corpus cavernosa sweeping lateral to medial.

Color & Spectral Doppler

- Obtain dorsal longitudinal images of the right corpus cavernosa without and with Color Doppler.
- Obtain a dorsal longitudinal image of the right corpus cavernosa measuring the diameter of the cavernosal artery (normal diameter is 0.2-1.0 mm).
- Obtain a dorsal longitudinal image of the right cavernosal artery measuring the PSV, EDV and RI (in the flaccid state PSV is 5-20 cm/sec, EDV is 0 cm/sec and RI is 1.0).
- Repeat these 3 steps for the left corpus cavernosa and the cavernosal artery.
- Obtain dorsal longitudinal images with Doppler flow in the mid plane of the penis to document patency of the superficial dorsal and deep dorsal veins.

ANATOMY:

- The dorsal aspect of the penis is the side with the two corpus cavernosa.
- The ventral (urethral) aspect of the penis is the side with the single corpus spongiosum (containing the urethra).



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