

CC03-S3

Frequently Requested GU Ultrasound in Clinical Practice

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## Ultrasonography of Scrotum and Penis

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Ultrasonography is the ideal noninvasive imaging modality for evaluation of scrotal abnormalities. It is capable of differentiating the most important etiologies of acute scrotal pain and swelling, including epididymitis and testicular torsion, and is the imaging modality of choice in acute scrotal trauma. In patients presenting with palpable abnormality or scrotal swelling, ultrasonography can detect, locate, and characterize both intratesticular and extratesticular masses and other abnormalities. A high frequency linear array transducer provides excellent anatomic detail of the testicles and surrounding structures. In addition, vascular perfusion can be easily assessed using color and spectral Doppler analysis. In most cases of scrotal disease, the combination of clinical history, physical examination, and information obtained with

ultrasonography is sufficient for diagnostic decision-making.

Penile Doppler ultrasonography is a high-performing, noninvasive or minimally-invasive imaging modality that allows the depiction of the normal anatomy and macroscopic pathologic changes in real time. Moreover, functional changes in penile blood flow, as seen in erectile dysfunction (ED), can be analyzed using color Doppler ultrasonography (CDUS). This lecture describes the normal sonographic anatomy of the penis, the sonographic technique for evaluating ED, the normal phases of erection, and the various causes of ED. Additionally, we describe the interpretation of different parameters and findings on penile CDUS for the Diagnosis and classification of ED, priapism, and Peyronie disease.