

CLINICAL PRESENTATION AND RADIOLOGY QUIZ QUESTION
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A 46 year old man presents with a non-tender right scrotal mass, which he noticed two weeks ago.

What is the imaging examination of choice for the initial evaluation of scrotal masses?

- (a) pelvic computed tomography (CT)
- (b) pelvic magnetic resonance imaging (MRI)
- (c) scrotal ultrasound (US)
- (d) pelvic plain film examination

RADIOLOGY QUIZ QUESTION, ANSWER, AND EXPLANATION

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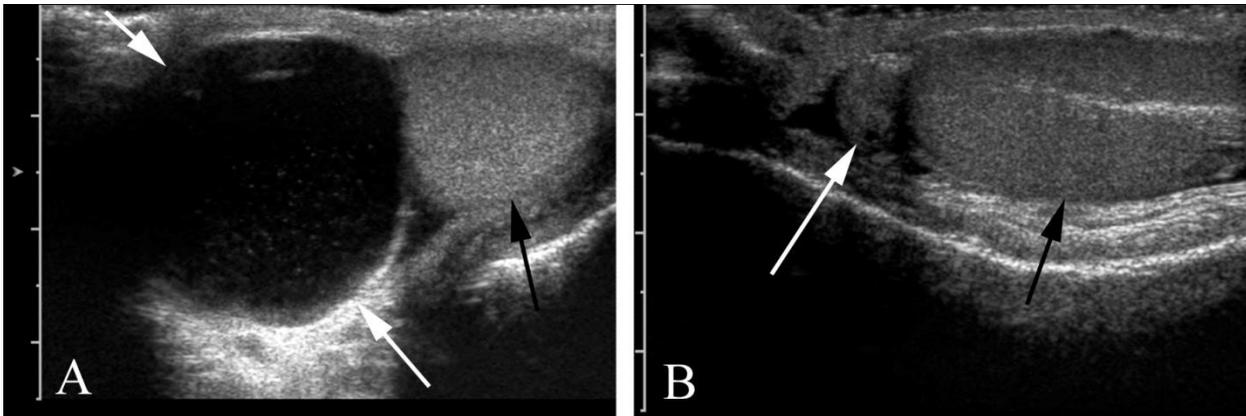
- (a) pelvic computed tomography (CT)
- (b) pelvic magnetic resonance imaging (MRI)
- (c) scrotal ultrasound (US)
- (d) pelvic plain film examination

Answer: (c), scrotal ultrasound. Scrotal ultrasound (US) is the imaging examination of choice for the evaluation of scrotal masses.

Pelvic computed tomography (CT) is not used for primary imaging of scrotal masses, although it may occasionally be used for staging malignancies, and (a) is incorrect. Similarly, pelvic magnetic resonance is not used for primary imaging of scrotal masses, although it may occasionally be used for staging malignancies or for further evaluation of known masses, and (b) is incorrect. Pelvic plain film examination may be used to evaluate for a possible fracture following trauma, but is not the imaging examination of choice for evaluation of scrotal masses, and therefore (d) is also incorrect.

IMAGING STUDY AND QUESTIONS

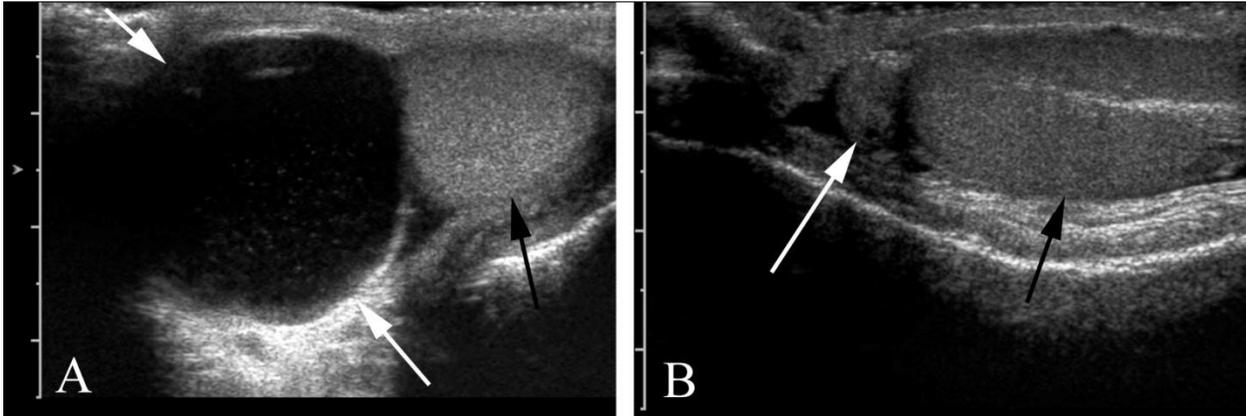
An imaging study was performed.



Imaging questions:

- 1) What type of study is this?
- 2) What structure does the black arrow point to in both A and B?
- 3) What is depicted by the white arrows in A? In B?
- 4) What is the diagnosis?
- 5) What is the next step in patient management?

IMAGING STUDY QUESTIONS AND ANSWERS



Imaging questions:

- 6) What type of study is this? Scrotal ultrasound.
- 7) What structure does the black arrow point to in both A and B? The normal testicle.
- 8) What is depicted by the white arrows in A? In B? In A, the white arrows point to a cystic structure of the epididymis, almost certainly a benign spermatocele. In B, the white arrow points to the normal epididymis.
- 9) What is the diagnosis? Spermatocele of the right epididymis.
- 5) What is the next step in patient management? Asymptomatic spermatoceles do not require specific treatment other than patient reassurance.

PATIENT DISPOSITION, DIAGNOSIS, AND FOLLOW-UP

The patient was diagnosed with a benign spermatocoele, and reassured that this is a benign lesion which does not require specific treatment.

SUMMARY

Presenting symptom: Scrotal masses basically fall into two categories: extratesticular and intratesticular. Most extratesticular lesions are benign cysts; if less than 2 cm in size these are usually called epididymal cysts and if over 2 cm they are called spermatoceles. Extratesticular malignancies are uncommon. Lesions of the testicle itself, on the other hand, are much more likely to be malignant and these lesions need further evaluation by a urologist.

Imaging work-up: Following the physical exam, if a scrotal lesion requires further evaluation (that is, if the scrotal lesion does not obviously represent a hydrocele or some other benign process), scrotal ultrasound is the examination of choice. Scrotal ultrasound will usually allow confident distinction between testicular and extra-testicular lesions, and differentiation between benign cysts and complex (mixed cystic and solid) or entirely solid masses.

Establishing the diagnosis: Ultrasound can provide a confident diagnosis of epididymal cyst/spermatocele, hydrocele, and varicocele. Ultrasound cannot distinguish (at least, not with complete accuracy) between benign and malignant testicular lesions, and these lesions will need further evaluation by a urologist (and, frequently, surgical removal).

Treatment: Asymptomatic epididymal cysts and spermatoceles do not require any specific treatment. The patient should be reassured that the process is benign and self-limited.

Take-home message: Ultrasound is the imaging study of choice for evaluation of scrotal masses.

FURTHER READING

Brenner JS, Ojo A. Causes of painless scrotal swelling in children and adolescents. UpToDate, accessed 9/4/2009.

Eyre RC. Evaluation of non-acute scrotal pathology in adult men. UpToDate, accessed 12/23/08.

Renfrew, DL. Female Pelvis and Male Scrotum. Chapter 2 of *Symptom Based Radiology*, Symptom Based Radiology Publishing, Sturgeon Bay, WI, 2010, available for no charge at www.symptombasedradiology.com.