

Eric B. Tomich, DO
Robert Blankenship, MD

From the Department of Emergency Medicine, Madigan Army Medical Center, Tacoma, WA.

The opinions or assertions contained herein are the private views of the authors and not to be construed as official or reflecting the views of the Department of the Army, the Department of Defense, or the US Government.

0196-0644/\$-see front matter

Copyright © 2008 by the American College of Emergency Physicians.

doi:10.1016/j.annemergmed.2007.11.029

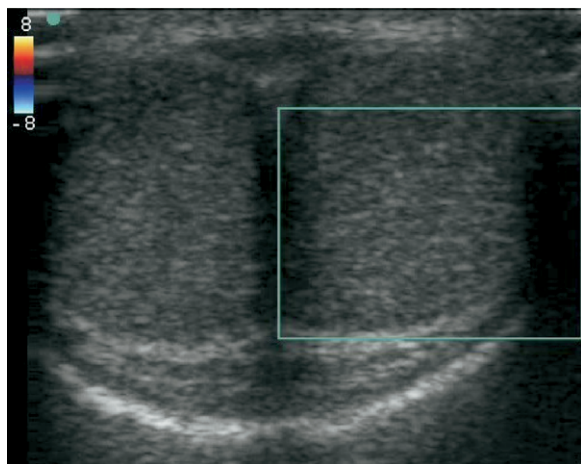


Figure 1. Color Doppler ultrasound of penis pretreatment.

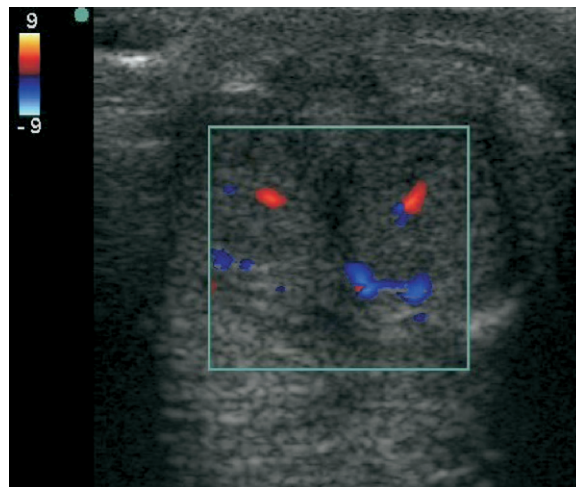


Figure 2. Color Doppler ultrasound of penis posttreatment. Used with permission of Eric B. Tomich, DO, Department of Emergency Medicine, Madigan Army Medical Center, Tacoma, WA.

[Ann Emerg Med. 2008;52:202.]

A 32-year-old man presented, complaining of a painful erection for the last 18 hours. His medical history was significant for insomnia and depression, for which he was taking quetiapine, bupropion, and prazosin. Examination revealed a mildly tender, fully erect penis and a soft glans. He was given 0.25 mg of subcutaneous terbutaline, with no improvement of symptoms. A color Doppler ultrasonograph in the transverse plane was taken before (Figure 1) and after (Figure 2) definitive treatment by urology.

For the diagnosis and teaching points, see page 210.

To view the entire collection of Images in Emergency Medicine, visit www.annemergmed.com

Publication dates: Received for publication April 13, 2007. Revision received July 24, 2007. Accepted for publication July 31, 2007. Available online October 15, 2007.

Reprints not available from the authors.

Address for correspondence: Amy H. Kaji, MD, MPH, Department of Emergency Medicine, Harbor-UCLA Medical Center, 1000 West Carson Street, Box 21, Torrance, CA 90509; 310-222-3500, fax 310-782-1763; E-mail akaji@emedharbor.edu.

REFERENCES

1. The Joint Commission. Available at: <http://www.JCAHO.org>. Accessed April 2, 2007.
2. Levi L, Bregman D, Geva H, et al. Hospital disaster management simulation system. *Prehosp Disaster Med*. 1998;13:29-34.
3. Gofrit ON, Leibovici D, Shemer J, et al. The efficacy of integrating "smart simulated casualties" in hospital disaster drills. *Prehosp Disaster Med*. 1997;12:97-101.
4. Levy K, Aghababian RV, Hirsche EF, et al. An Internet-based exercise as a component of an overall training program addressing medical aspects of radiation emergency management. *Prehosp Disaster Med*. 2000;15:18-25.
5. Evaluation of Hospital Disaster Drills: A Module-Based Approach. Prepared for the Agency for Healthcare Research and Quality. Contract No. 290-02-0018, and prepared by the Johns Hopkins University Evidence-based Practice Center, the Johns Hopkins University Bloomberg School of Public Health, and the Johns Hopkins University Applied Physics Laboratory, April 2004.
6. Training of hospital staff to respond to a mass casualty incident. Available at: <http://www.ahcpr.gov/clinic/epcix.htm>. Accessed on April 2, 2007.
7. Available at: visit <http://www.emsa.cahwnet.gov/dms2/download.htm>. Accessed on April 2, 2007.
8. Available at: <http://www.ambpeds.org/ReliabilityandValidity.pdf>. Accessed on April 2, 2007.
9. Available at: <http://www.emsa.cahwnet.gov/dms2/hospambex.asp>. Accessed on April 2, 2007.
10. Available at: <http://www.nhs.gov/aspr/opeo/hpp>. Accessed on April 2, 2007.
11. Hatcher L. *A Step-By-Step Approach Using the SAS(R) System for Factor Analysis and Structural Equation Modeling*. Cary, NC: SAS Institute.
12. Yu CH. An introduction to computing and interpreting Cronbach coefficient alpha in SAS. Statistics, data analysis, and data mining. Available at: <http://www.creative-wisdom.com/pub/cronbach.html>. Accessed April 2, 2007.
13. Nunnally J. *Psychometric Theory*. New York, NY: McGraw-Hill Publishing; 1978.
14. Santos JR. Cronbach's alpha: a tool for assessing the reliability of scales. Available at: <http://www.joe.org/joe/1999april/tt3.html>. Accessed April 2, 2007.
15. Cronbach LJ. Coefficient alpha and the internal structure of tests. *Psychometrika*. 1951;16:297-333.
16. Iacobucci D, Duhacek A. Advancing alpha: measuring reliability with confidence. *J Consumer Psychol*. 2003;13:478-487.
17. Ebel RL. Estimation of the reliability of ratings. *Psychometrika*. 1951;16:407-424.
18. Duhacek A, Coughlan AT, Iacobucci D. Results on the standard error of the coefficient alpha index of reliability. *Market Sci*. 2005; 24:294-301.
19. Thompson WD, Walter SD. Variance and dissent. A reappraisal of the kappa coefficient. *J Clin Epidemiol*. 1988; 41:949-958.
20. Thompson WD. Kappa and attenuation of the odds ratio. *Epidemiology*. 1990;1:357-369.
21. Gwet K. Kappa statistic is not satisfactory for assessing the extent of agreement between raters. Available at http://www.msu.edu/course/psy/818/deshon/Projects/Project_2/generalized_kappa.doc. Accessed September 6, 2007.

IMAGES IN EMERGENCY MEDICINE

(continued from p. 202)

DIAGNOSIS:

Low-flow (ischemic) priapism. Priapism is classified as low-flow/ischemic, a urologic emergency, or high-flow/nonischemic, a condition that warrants only observation and outpatient follow-up.¹ Prompt differentiation between the 2 is important for the emergency physician and has classically been accomplished through corporal blood gas analysis, a potentially painful procedure with risk of iatrogenic injury to the cavernosal artery.² It may also overestimate the actual flow state in ischemic priapism.³ The use of color Doppler ultrasonography in priapism is well documented in the urology literature, with many studies showing it to be an equivalent or preferred modality.^{1,3,4} While a high-frequency linear transducer is used, the penis is scanned on the ventral aspect in both transverse and longitudinal planes. The presence or lack of flow from the cavernosal arteries can be rapidly determined.¹ Emergency medicine treatment algorithms recommend early consultation with urology when the diagnosis is suspected.⁵

REFERENCES

1. Sadeghi-Nejad H, Dogra V, Seftel AD, et al. Priapism. *Radiol Clin North Am*. 2004;42:427-443.
2. Altman AL, Seftel AD, Brown SL, et al. Cocaine associated priapism. *J Urol*. 1999;161:1817-1818.
3. Bochinski DJ, Dean RC, Lue TF. Erectile dysfunction and priapism. *Nat Clin Pract Urol*. 2004;1:49-53.
4. Secil M, Arslan D, Goktay AY, et al. The prediction of papaverine induced priapism by color Doppler sonography. *J Urol*. 2001;165:416-418.
5. Monkhouse SJ, Bell S. Low-flow priapism needs recognition and early correct treatment. *Emerg Med J*. 2007;24:209-210.