

10. Kothari RU, Pancioli A, Liu T, Brott T, Broderick J. Cincinnati Prehospital Stroke Scale: reproducibility and validity. *Ann Emerg Med* 1999;33:373-8.
11. Kothari R, Hall K, Brott T, Broderick J. Early stroke recognition: developing an out-of-hospital NIH stroke scale. *Acad Emerg Med* 1997;4:986-90.
12. Kidwell CS, Saver JL, Schubert GB, Eckstein M, Starkman S. Design and retrospective analysis of the Los Angeles Prehospital Stroke Screen (LAPSS). *Prehosp Emerg Care* 1998;2:267-73.
13. Buchan AM, Feasby TE. Stroke thrombolysis: Is tissue plasminogen activator a defibrillator for the brain? *CMAJ* 2000;162(1):47-8.
14. Smith WS, Isaacs M, Corry MD. Accuracy of paramedic identification of stroke and transient ischemic attack in the field. *Prehosp Emerg Care* 1998;2:170-5.
15. Clawson JJ, Martin RL, Hauert SA. Protocols versus guidelines. Choosing a medical-dispatch program. *Emerg Med Serv* 1994;23:52-60.
16. Wheeler HB, Hirsh J, Wells P, Anderson FA. Diagnostic tests for deep vein thrombosis. *Arch Intern Med* 1994;154:1921-8.
17. Deyo RA, Haselkorn J, Hoffman R, Kent DL. Designing studies of diagnostic tests for low back pain or radiculopathy. *Spine* 1994;19:2057S-65S.
18. Kothari R, Barsan W, Brott T, Broderick J, Ashbrock S. Frequency and accuracy of prehospital diagnosis of acute stroke. *Stroke* 1995;26(6):937-41.

Correspondence to: Dr. Richard Verbeek, Toronto Ambulance, 4330 Dufferin St., Toronto ON M3H 5R9; rverbeek@basehospital.on.ca

DIAGNOSTIC CHALLENGE • DÉFI DIAGNOSTIQUE

Answer

Kirk Hollohan, MD

The correct diagnosis is number 2: Fitz-Hugh–Curtis Syndrome. While in the ED the patient's temperature spiked to 38.4°C. After surgical consultation she was taken to the operating room with "probable" appendicitis. Laparoscopy revealed inflammation of the cecum, hepatic flexure and perihepatic region, as well as free pus in the peritoneal cavity. The appendix was normal, and cervical cultures taken in the ED subsequently grew *Neisseria gonorrhoeae*.

The Fitz-Hugh–Curtis syndrome (FHCS) is an extrapelvic manifestation of pelvic inflammatory disease (PID). Classically, it consists of adhesions (resembling "violin strings") between the liver capsule and the diaphragm or anterior peritoneal surface.¹ The incidence of FHCS in

patients with PID may be as high as 15%. While it is predominantly a disease of women, cases have been reported in men. *Chlamydia trachomatis* and *Neisseria gonorrhoeae* are the main culprits, but the former is more common. Organisms are thought to reach the liver by lymphatic and hematogenous routes as well as by transperitoneal migration from the fallopian tubes.²

Symptoms usually include pleuritic right upper quadrant pain that is worse with movement. The most frequent associated symptoms are lower abdominal pain (salpingitis) and tenderness. In most patients, the upper abdominal pain begins concurrently with the lower abdominal pain, but in 30% of patients the upper abdominal pain may begin as long as 14 days later.³

Almost all patients have right upper quadrant tenderness and half exhibit guarding. A positive Murphy's sign is present in approximately 20% of

patients. A hepatic friction rub is infrequently heard. Signs of PID may be marked or absent.

Laboratory studies are rarely helpful. The white blood count is elevated in about 30%, and liver enzymes are normal in the majority. The traditional gold standard for the diagnosis of FHCS is laparoscopic visualization of "violin string" adhesions around the liver.

References

1. Lopez-Zeno JA. The Fitz-Hugh–Curtis syndrome revisited: changing perspectives after half a century. *J Reprod Med* 1985;30:567-82.
2. McCormick M. An atypical presentation of the Fitz-Hugh–Curtis syndrome. *J Emerg Med* 1990;8:55-8.
3. Counselman FL. An unusual presentation of Fitz-Hugh–Curtis syndrome. *J Emerg Med* 1994;12:167-70.

Correspondence to: hollohan@interchange.ubc.ca

For the Challenge, see page 82.

Department of Emergency Medicine,
St. Paul's Hospital, BC