Ascites With a Communicating Hydrocele Detected by Peritoneal Scintigraphy

Chien-Chin Hsu, MD, Yu-Wen Chen, MD, Ya-Wen Chuang, MD, and Ying-Fong Huang, MD

Abstract: A hydrocele is a collection of fluid within the tunica or processus vaginalis. Most pediatric hydroceles are congenital and adult hydroceles are usually secondary. The latter can present acutely from local injury, infection, radiotherapy, or increased intraabdominal pressure. A 53-year-old man with underlying liver cirrhosis was admitted for dyspnea and abdominal distention. Massive ascites with swelling of the right hemiscrotum was noted. A communicating hydrocele was detected by peritoneal scintigraphy. After surgical repair of the communicating shunt by a Bassini procedure, the problem of the right hydrocele was resolved.

Key Words: ascites, cirrhosis, communicating hydrocele, peritoneal scintigraphy

(*Clin Nucl Med* 2004;29: 326)

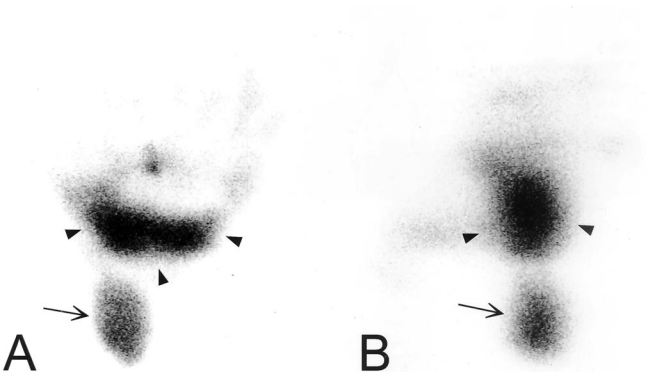

FIGURE 1. A 53-year-old man with postviral cirrhosis was admitted for dyspnea and abdominal distention resulting from massive ascites. Acute swelling of the right hemiscrotum was noted during the period of admission. The swollen hemiscrotum was painless and transilluminated, providing evidence of a hydrocele. To detect the presence of a communicating hydrocele, peritoneal scintigraphy[1–4] was performed by intraperitoneal injection of 3 mCi (111 MBq) Tc-99m macroaggregated albumin. (**A**) Anterior and (**B**) right lateral views of the lower abdominal and scrotal areas were obtained with the patient in a standing position[4] 30 minutes later. The images showed radiotracer accumulation within the peritoneal cavity (arrowheads) and right hemiscrotum (arrows). A hydrocele resulting from a communicating shunt between the peritoneal cavity and scrotum was confirmed. After surgical repair of the communicating shunt by a Bassini procedure,[5] the problem of the right swollen hemiscrotum was resolved. Adult hydroceles are usually secondary and can present acutely from local injury, infection, radiotherapy, or increased intraabdominal pressure. The incidence of adult hydroceles is rising with increasing use of the peritoneal cavity for peritoneal dialysis,[6,7] ventriculoperitoneal shunts,[8] and renal transplants.[9] Massive ascites resulting in a secondary hydrocele is rare. The increased intraabdominal pressure caused by massive ascites could give rise to a patent shunt that permits flow of peritoneal fluid into the scrotum.

REFERENCES

1. Ducassou D, Vuillemin L, Wone C, et al. Intraperitoneal injection of technetium-99m sulfur colloid in visualization of a peritoneo-vaginalis connection. *J Nucl Med*. 1984;25:68–69.
2. Walker JV, Fish MB. Scintigraphic detection of abdominal wall and diaphragmatic peritoneal leaks in patients on continuous ambulatory peritoneal dialysis. *J Nucl Med*. 1988;29:1596–1602.
3. Rajnish A, Ahmad M, Kumar P. Peritoneal scintigraphy in the diagnosis of complications associated with continuous ambulatory peritoneal dialysis. *Clin Nucl Med*. 2003;28:70–71.
4. Suga K, Kaneko T, Nishigauchi K, et al. Demonstration of inguinal hernia by means of peritoneal Tc-99m MAA scintigraphy with a load produced by standing in a patient treated by continuous ambulatory peritoneal dialysis. *Ann Nucl Med*. 1992;6:203–206.
5. Castrini G, Pappalardo G, Trentino P, et al. The original Bassini technique in the surgical treatment of inguinal hernia. *Int Surg*. 1986;71:141–143.
6. Gloor HJ, Nichols WK, Sorkin MI, et al. Peritoneal access and related complications in continuous ambulatory peritoneal dialysis. *Am J Med*. 1983;74:593–598.
7. Wetherington GM, Leapman SB, Robison RJ, et al. Abdominal wall and inguinal hernias in continuous ambulatory peritoneal dialysis patients. *Am J Surg*. 1985;150:357–360.
8. Magee JF, Barker NE, Blair GK, et al. Inguinal herniation with glial implants: possible complication of ventriculoperitoneal shunting. *Pediatr Pathol Lab Med*. 1996;16:591–596.
9. Penn I, Mackie G, Halgrimson CG, et al. Testicular complications of following renal transplantation. *Ann Surg*. 1972;176:697–699.

Received for publication June 16, 2003; revision accepted September 2, 2003.

From the Department of Nuclear Medicine, Chung-Ho Memorial Hospital, Kaohsiung Medical University, Kaohsiung, Taiwan.

Reprints: Chien-Chin Hsu, MD, Department of Nuclear Medicine, Chung-Ho Memorial Hospital, Kaohsiung Medical University, 100 Tzyou 1st Road, Kaohsiung 807, Taiwan. E-mail: cchsu@kmu.edu.tw.

ISSN: 0363-9762/04/2905-0326
DOI: 10.1097/01.rlu.0000123324.02601.e2