
RSNA Press Release

Through-the-Skin Abscess Drainage: A Way Out of Surgery for Some Crohn Disease Patients

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At least 1 in 10 patients with Crohn disease, a chronic inflammatory disorder of the lower small bowel and colon affecting an estimated 7 of every 10,000 Americans, will develop one or more abdominal or pelvic abscesses in the course of the illness. In some reports the figure is as high as 3 in 10. An abscess, which is a pus-filled pocket, can form when the small bowel ruptures, but the area of infection is walled off by surrounding inflamed tissue and limited to a discrete area. Left untreated, an abscess can continue to grow, with possibly disastrous consequences from spread of infection. Historically, immediate surgical drainage has been the answer, but a less invasive option is now offered by interventional radiologists. By placing a drainage catheter through the skin directly into the abscess, radiologists have helped an impressive number of patients avoid surgery.

The largest study to date of percutaneous abscess drainage (PAD) was reported in the March 2002 issue of the journal *Radiology* by Debra A. Gervais, M.D., Director of Abdominal Interventional Radiology at Massachusetts General Hospital in Boston, and her colleagues at Harvard Medical School. In many cases, claims Dr. Gervais, "With PAD and intravenous antibiotics, the abscess and infection can be cleared, sparing the patient from surgery." Should an operation prove necessary later to remove a diseased segment of bowel, at least the surgeon will be working within a clean field.

The procedure is a comparatively simple one and usually takes only 30 to 60 minutes. The patient is sedated intravenously but not anesthetized. After taking ultrasound or CT images in the area of interest, a point on the skin overlying a clear path to the abscess is injected with local anesthetic, and an incision about an inch long is made through which the drainage catheter is placed. After further imaging to confirm that the tube is well positioned, its outer end is attached to a drainage bag. As much material as possible is removed with a syringe, and the tube is left in place. A patient whose general condition improves may continue tube drainage at home if instructed in tube care (which is quite simple), or if arrangements are made for a visiting nurse.

Thirty-two patients with Crohn disease had PAD of an abdominal or pelvic abscess and were

followed up for at least 22 months, and for more than seven years on average. The results:

- Up to 2 liters of abscess fluid were drained at the outset.
- All but 2 of 53 abscesses were drained adequately through the catheter, for a technical success rate of 96%.
- Half the patients had short-term successes in that they did not require surgery within the first two months. Drainage continued for just over two weeks on average. Patients with postoperative abscesses did better than those who developed an abscess before any surgery.
- On long-term follow-up, one patient had died of causes unrelated to the study. Of 31 surviving patients, 7 (23%, or nearly one-fourth of the total) avoided surgery altogether.
- Seven patients had a recurrent abscess, about as many as would have been expected after surgical drainage; some of them did well after repeat catheter drainage.
- The single complication was a fistula (a track between the abscess site and skin), which required surgical repair; it developed after the abscess had healed.

"PAD has already been used extensively in the treatment of abscesses in the abdomen, pelvis and chest," Dr. Gervais points out. "The success rate is quite high, and the morbidity is low." PAD, performed in a medical center's interventional radiology suite, is less costly than surgical drainage. Fortunately, interventional radiologists skilled in PAD are now on staff at many community hospitals.

Radiology is a monthly scientific journal devoted to clinical radiology and allied sciences. The journal is edited by Anthony V. Proto, M.D., School of Medicine, Virginia Commonwealth University, Richmond, Virginia. It is owned and published by the Radiological Society of North America, Inc.

The Radiological Society of North America (RSNA) is an association of more than 30,000 radiologists and physicists in medicine dedicated to education and research in the science of radiology. The Society's headquarters is located at 820 Jorie Boulevard, Oak Brook, IL 60523-2251.

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"Percutaneous Abscess Drainage in Crohn Disease: Technical Success, Short-Term Outcomes, and Long-Term Outcomes over a 14-Year Period." Collaborating with Dr. Gervais on this report are Peter F. Hahn, MD, PhD; Mary J. O'Neill, MD; and Peter R. Mueller, MD.