

Choose Your Weapon for Postpancreatitis Infection

Some form of debridement or drainage is imperative when peripancreatic infection is present.

BY BETSY BATES

Los Angeles Bureau

LOS ANGELES — Management options for infections following acute pancreatitis have expanded in recent years, with enhancement of percutaneous and endoscopic techniques and improvements in laparoscopic alternatives to open surgery.

But open pancreatic necrosectomy still has a vital and sometimes lifesaving role, Nicholas N. Nissen, M.D., said at the 12th International Symposium on Pancreatic and Biliary Endoscopy sponsored by the Cedars-Sinai Medical Center.

Some form of debridement or drainage is imperative when peripancreatic infection is present, which happens in about 30%-50% of pancreatic necrosis cases, Dr. Nissen emphasized.

"The mortality rate for untreated infected pancreatic necrosis is 100% without drainage or debridement," he noted.

The best treatment method for an individual patient depends on a number of factors, said Dr. Nissen, who has a special interest in minimally invasive surgery of the liver and pancreas at Cedars-Sinai.

He also serves on the surgical faculty at the University of California, Los Angeles.



Management considerations include:

► **Duration of disease.** During the early inflammatory phase of severe pancreatitis, the risk of infection is low. However, even 2-3 weeks after symptom onset, a CT scan may show evidence of early organization and loculation of peripancreatic fluid that may indicate a gathering infection.

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DR. NISSEN

► **Stability of the patient.** "A hemodynamically unstable patient or a patient in septic shock really doesn't belong in an interventional radiology unit having percutaneous drainage. They really belong in the operating room," Dr. Nissen said.

► **Local expertise.** Some interventional radiologists are comfortable with cases that require aggressive drainage of necrotic peripancreatic fluid, while others really only want to handle pseudocysts. Surgical referral is a better alternative than pushing a radiologist beyond his or her limits.

► **The likelihood of success.** If a case seems likely to require multiple endoscopic treatments, surgery may be a wiser first option, as the extent of debridement can be much more aggressive with surgery and the likelihood of repeated procedures much lower.

► **The need for other procedures.** A patient with an infection who is also likely to need a cholecystectomy or another surgi-

cal procedure is best served by having one procedure—surgery.

Debridement may be accomplished via laparotomy, laparoscopy, endoscopic transgastric drainage, or a novel percutaneous technique called sinus tract endoscopy.

Percutaneous and endoscopic approaches work best when the infection is mostly liquid, without organized necrotic tissue, Dr. Nissen said.

Extensive infection and/or a dense necrotic bed without liquefaction, especially in an unstable patient, call for open pancreatic necrosectomy. "This is a fairly



Necrotic tissue (arrow) is removed from behind the stomach (S). The tube is a previously placed percutaneous drain.

impressive procedure—dramatic for the surgeon and for the patient," he said.

Wound complications, enteric fistulas, and bleeding often complicate the procedure, which carries a reported mortality of 20%-50%.

Most patients require repeated laparotomies; however, the surgery can be lifesaving in grave cases.

A rather large incision permits access for surgical instruments used to physically re-

move as much necrotic tissue as possible—ideally, up to 90%.

Other cases can be handled laparoscopically, even in the face of complications arising when a percutaneous drain fails to resolve symptoms of infection.

In one 26-year-old woman with mercaptopurine-induced pancreatitis, a CT scan performed 5 weeks after symptom onset appeared to show mostly fluid behind the stomach. The woman was symptomatic and feverish, and a percutaneous drain placed after aspiration of fluid was repeatedly malfunctioning.

Dr. Nissen showed a video demonstrating laparoscopic pancreatic debridement; large amounts of necrotic tissue were removed from behind the stomach using minimally invasive techniques.

The principal objective of surgery was to physically remove "wads" of necrotic tissue that could not be seen on the rather benign-appearing CT scan. A larger-bore drain was placed at the conclusion of surgery; the original drain had been too small to handle the large amount of necrotic tissue.

"Once that necrotic tissue is gone, there is a much better chance of this cavity collapsing around the drain, small leaks or big leaks closing, and of the sepsis resolving," he said.

"Our ability to laparoscopically manage pancreatic necrosis and pancreatic fluid collections is an important advance in the field of pancreatic surgery.

"Techniques and practices are continuing to evolve and are increasingly reliant on the cooperative efforts of gastroenterologists, surgeons, and radiologists," Dr. Nissen added. ■

Pancreatic Stone Removal Won't Relieve Pain in All Patients

BY BETSY BATES

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LOS ANGELES — Clinical and imaging clues provide excellent guidance as to which patients would derive the most benefit from endoscopic pancreatic calculi removal, Robert H. Hawes, M.D., said at the 12th International Symposium on Pancreatic and Biliary Endoscopy sponsored by Cedars-Sinai Medical Center.

"The main issue when you're looking at patients with pancreatic stones or calcific chronic pancreatitis is pain relief," said Dr. Hawes, professor of gastroenterology and hepatology at the Medical University of South Carolina in Charleston.

"We can talk about improving ductal drainage. We can talk about ... improving functional deficits. We can talk about weight gain. We can talk about improving quality of life. But the fact of the matter is, the main issue is pain."

Therefore, patients with chronic calcific pancreatitis who do not have pain should not be considered candidates for stone removal, he asserted.

Nor should stone removal be attempted in an effort to improve steatorrhea, which should be treated with enzymes.

Among patients who do experience

pain, those living a "plateau-type existence" with chronic pancreatitis—suffering constant pain—are least likely to achieve significant relief by having calculi removed and obstructions of the main pancreatic duct alleviated, Dr. Hawes said.

The best candidates, he said, are those with chronic relapsing calcific pancreatitis. These are patients who are "cruising along fine" until they suffer periodic acute bouts of pancreatitis, complete with an elevation of enzymes, extreme pain, and often, nausea and vomiting.

Their chances of success with endoscopic intervention improve even more if they meet certain criteria evident on imaging studies, including:

- A large, dilated pancreatic duct.
- Three or fewer stones.
- Stones confined to the head and/or body of the pancreas.
- Stone size less than 10 mm.
- The absence of impacted stones.
- The absence of downstream strictures.

Ideal candidates can achieve dramatic re-

sults from sphincterotomy with endoscopic calculi removal, ideally in conjunction with extracorporeal shock wave lithotripsy (ESWL), he said.

Even without the advantage of adjunctive ESWL, increasingly considered "al-

most indispensable" in centers treating chronic pancreatitis, endoscopic techniques can be highly effective. A study published by Dr. Hawes and his colleagues showed endoscopic therapy to be effective in 83% of

patients with chronic relapsing pancreatitis, compared with just 46% of those presenting with continuous pain (Gastrointest. Endosc. 1991;37:511-7).

Not every stone must be removed to achieve substantial pain relief, Dr. Hawes emphasized.

He stopped short of discouraging endoscopic therapy in patients with unremitting pain, noting, "it's worth a try but may not help."

Divergent rates of success for stone removal may be related to the fact that there are two underlying explanations

for pain associated with chronic calcific pancreatitis, he said.

In pancreatic duct obstruction, pain results from parenchymal hypertension. This scenario responds well to ductal decompression. Pain associated with pancreatic and peripancreatic neural inflammation, most often associated with long-standing chronic disease, does not.

Careful imaging can point to whether endoscopic treatment should be undertaken and in some cases, bring to light massive stones and strictures that could be managed only by lithotripsy or surgical Whipple resection.

"I would strongly recommend that if you see patients with chronic pancreatitis, that you switch your gears from a reflex of just getting a CT scan to talking to your radiologist and getting geared up for high-quality MRI scanning ... with secretin stimulation," Dr. Hawes said.

No other modality gives such clear or important information in treatment planning for patients with chronic pancreatitis, he said.

Dr. Hawes disclosed that he has received grants from Olympus America Inc. and research support from Wilson-Cook Medical Inc. and Boston Scientific Corp., and he is a consultant for InScope. ■

Rates of success for stone removal may differ because there are two underlying explanations for pain linked to chronic calcific pancreatitis.