Opinion statement

Painful chronic pancreatitis is difficult to manage. We believe a multidisciplinary approach is the best means of evaluating this complex syndrome. In our opinion, the initial evaluation should aim at firmly establishing the diagnosis of chronic pancreatitis: calcifications on imaging; duct morphologic changes on pancreatography; parenchymal changes on ultrasound; or evidence of pancreatic dysfunction on secretin/cholecystokinin stimulation tests. In addition, psychological assessment and quality-of-life measurements are recommended.

Once the diagnosis of chronic pancreatitis has been made, characterization of the chronic pain syndrome (visceral, non-visceral) with a diagnostic differential nerve block (DNB) is performed. Unlike celiac plexus block, which interrupts visceral afferent impulses traveling through the celiac plexus, a DNB is a meticulous, diagnostic temporary block that localizes the origin of chronic abdominal pain. This pain can be classified as visceral, psychologic/central, somatosensory, or mixed when more than one pain pathway is involved. Treatment modalities are different for these different types of pain syndromes. Chronic pancreatic pain should be visceral in origin if pain is stemming from an inflamed/scared gland [1]. There is evidence that DNB may be helpful in characterizing abdominal pain in chronic pancreatitis [1]. Furthermore, it allows better selection of patients for treatment of chronic pancreatic pain [2••].

Initial treatment in all patients should include pancreatic enzyme therapy, abstinence from alcohol, non-narcotic analgesics, and a low-fat diet. Patients who fail initial therapy should be considered for surgery or enrollment in medical treatment trials. Those identified by DNB as having visceral-type pain should be directed to medical and surgical therapy based on pancreatic duct morphology. Visceral-pain patients with dilated ducts or focal disease should undergo pancreatic duct drainage, or surgical resection procedures. Patients with nonciliated ducts should undergo further medical therapy, including celiac plexus blocks, enrollment into treatment trials of endoscopic therapy, or drug trials with new agents such as tramadol, gabapentin, or octreotide, or nutritional supplementation. Finally, those patients with visceral pain unresponsive to all medical therapy and who are not surgical candidates should be enrolled in a trial of thorascopic splanchnicectomy for intractable pain (Fig. 1).

Patients identified by DNB as having a non-visceral type of chronic abdominal pain should undergo initial medical therapy as above (enzymes, cessation of alcohol, diet modifications, analgesics).
Introduction

Chronic pancreatitis results in more than 122,000 outpatient visits in the United States and more than 56,000 hospitalizations per year [3]. In the United States, alcoholism is the most common cause of chronic pancreatitis in more than 70% of cases [3]. Chronic pancreatitis is often associated with severe abdominal pain, which is responsible for the majority of the hospitalizations related to this illness [3]. Chronic pancreatic pain is difficult to treat and it varies from mild to intermittent, to constant and disabling, leading to loss of work and frequent hospitalizations. Medical treatment of pain is frequently unsatisfactory. The potential for narcotic addiction is high and frequently compounded by a history of chemical dependency to alcohol and narcotic analgesics.

There is no clear treatment approach to chronic pancreatic pain and there is presently no standard of care [4••]. A recent American Gastroenterology Association Medical Position Paper states that studies on the treatment of pain in chronic pancreatitis are hindered because of the heterogeneity of this patient population, the subjective nature of pain, and the poor understanding of its pathophysiology. The paper states that there are few controlled trials that meet high standards for clinical research and none that compare surgical and nonsurgical therapy. Treatments to date, says the paper, have been strategically haphazard, ill-defined, too often unsuccessful, and controversial [4••].

This review will discuss the present treatment options available for patients with chronic pancreatic pain, and discuss a multidisciplinary approach utilized at our institution.

The natural history of chronic pancreatitis is usually characterized by a relentless and progressive loss of pancreatic parenchymal tissue. This may be followed by the loss of pancreatic pain (pancreatic burnout) or patients may continue to have chronic unrelenting abdominal pain. The concept of pancreatic burnout remains controversial. Ammann et al. [5••] recently described two distinct types of pain (A and B) seen in their longitudinal study of 207 patients with chronic alcoholic pancreatitis (Fig. 2). Type A pain was characterized by short (usually less than 10 days) relapsing pain episodes separated by pain-free intervals of several months up to and including one year. Type B pain was characterized by prolonged periods of either persistent (daily) severe pain exacerbations, or recurrent clusters of that pain. In their experience, relief of chronic pain regularly followed selective surgery tailored to the presumptive pain cause, or occurred spontaneously in uncomplicated advanced chronic pancreatitis.

Another study by Layer et al. [6] in patients with idiopathic and alcoholic chronic pancreatitis described two distinct forms of idiopathic chronic pancreatitis (early onset, late onset). The authors described patients with early-onset pancreatitis as having a long course of severe pain, with the development of morphological and functional pancreatic damage. They found that patients with late-onset pancreatitis had a mild and ultimately painless course of chronic pancreatitis. Both forms of idiopathic chronic pancreatitis differ from the alcoholic pancreatitis in their equal gender distribution and much slower rate of calcification, according to the study.