EVIDENCE-BASED
CARE SHEET

Pancreatitis, Acute: Pain Control

What We Know

- Acute pancreatitis (AP) is a rapidly developing, potentially fatal inflammatory disorder of the pancreas, with diverse involvement of other organ systems; AP can be mild to severe, with a clinical course that varies widely from patient to patient.[5, 6, 7] (See *Quick Lesson About… Pancreatitis, Acute*)
  - The inflammation caused by dysfunctionally activated pancreatic enzymes in AP has a direct effect on sensory nerves at spinal cord level T5–T9, which results in visceral pain[1, 6, 8]
    - Gradually increasing abdominal pain that plateaus after several hours is the primary characteristic of mild AP; pain that persists more than a few days is associated with the development of complications that characterize severe AP[1, 4, 5]
      - Pain may radiate from the abdomen to the back or chest
      - Pain is exacerbated by eating foods high in fat or drinking alcoholic beverages, or when the patient is in a supine position
        - Although rare, painless mild AP may occur in association with postoperative states, renal transplantation, peritoneal dialysis, diabetic ketoacidosis, and shock of unknown origin
- Providing adequate pain control is an essential treatment strategy for patients with AP[3, 6]
  - Narcotic (i.e., opioid) analgesia is usually required because alternatives (i.e., nonopioid analgesia medications) are completely ineffective in alleviating the pain of severe AP[2, 3, 8]
    - The traditional belief that opioid analgesia causes additional pancreatic dysfunction is unsupported by clinical trial evidence[6, 8, 9]
  - Pain management with patient-controlled analgesia (PCA) is common because oral intake is restricted; PCA-infused narcotic analgesics typically prescribed for patients with AP are[2, 6, 8, 9]
    - morphine sulfate (Avinza, Kadian, MS Contin, MSIR, Roxanol, Astramorph PF, Duramorph, Infumorph)
    - fentanyl citrate (Sublimaze)
      - A transdermal system using a fentanyl patch (Duragesic) may be used
    - hydromorphone hydrochloride (Dilaudid)
    - meperidine hydrochloride (Demerol); although occasionally given for pain in the past, meperidine hydrochloride is currently prescribed less frequently because accumulating evidence indicates a risk of neurotoxicity with its use[9, 10]
  - Patients with pain not relieved with a strong opioid may be given adjuvant medications (i.e., drugs with analgesic properties that have a primary indication that is not the treatment of pain)[1]
    - The most commonly prescribed adjuvant analgesics in the treatment of patients with AP are antidepressants (e.g., selective serotonin reuptake inhibitors [SSRIs]) and anticonvulsants
- Epidural analgesia is used for pain control in some specialized healthcare facilities[6, 9]
  - Epidural analgesia also may improve the disordered abdominal microcirculation that characterizes AP, which could reduce the rate or severity of complications (e.g., ileus, or intestinal obstruction)[6]
    - Although the safety and effectiveness of epidural analgesia have been established in AP, reasons for using it cautiously include that[6, 9]
      - the procedure requires great technical skill
      - patients must meet specific criteria to qualify for this level of pain relief; patients fail to qualify if their AP disease process includes
        - coagulation abnormalities
        - systemic infection or significantly increased potential for systemic infection
        - cerebral dysfunction or the need for strong sedatives, since both factors potentially interfere with patient awareness of procedure complications

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- Patients who are clinically asymptomatic, without nausea, vomiting, or abdominal pain for 24 hours, and who have normal bowel sounds, are started on a clear liquid diet and monitored closely for postprandial pain.[2, 6, 7] (See *Evidence-Based Care Sheet: Pancreatitis, Acute: Nutritional Support*)
  - Timing of oral refeeding and the composition of the diet are critical factors to prevent abdominal pain recurrence. Oral feeding is associated with a 21–24 % chance of pain relapse; about half of all cases of pain relapse occur within 2 days after starting oral feeding[6]
    - Risk of pain relapse is higher in patients who[6]
      - are recovering from severe AP
      - have necrotic pancreatic tissue
  - Pain control should resume immediately if the patient experiences pain after eating, and restriction of all oral intake should be resumed until the patient is again pain-free for 24 hours

What We Can Do

- Learn about acute pain control in AP so you can accurately assess your patients' personal characteristics and health education needs. Share this information with your colleagues
- Intensively monitor your AP patients' pain status and provide analgesic medications as ordered[3, 9]
  - Educate your AP patients about the use of PCA; encourage them to use it instead of tolerating pain
    - Provide written materials, if possible, to enhance their understanding of how AP pain control does not result in addiction and is important to the recovery process
    - Explain in detail the oral restriction requirement and the milestones that must be reached before a regular diet is resumed
    - Update your patients each day to help them understand their physiological status and the rationale for treatment
  - Assess your AP patients' level of anxiety and ability to cope with a life-threatening disease; provide emotional support and request a referral to a mental health clinician for counseling, if appropriate
- Collaborate with your hospital's continuing medical education department to provide education about pain control in AP for clinicians of all specialties

Coding Matrix

References are rated in order of strength:

M Published meta-analysis
SR Published systematic or integrative literature review
RCT Published research (randomized controlled trial)
R Published research (**not** randomized controlled trial)
C Case histories, case studies
G Published guidelines
RV Published review of the literature
RU Published research utilization report
QI Published quality improvement report
L Legislation
PGR Published government report
PFR Published funded report
PP Policies, procedures, protocols
X Practice exemplars, stories, opinions
GI General or background information/texts/reports
U Unpublished research, reviews, poster presentations or other such materials
CP Conference proceedings, abstracts, presentations

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