

Clinical Guideline Highlights for the Hospitalist: Initial Management of Acute Pancreatitis in the Hospitalized Adult

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GUIDELINE TITLE: 2018 American Gastroenterological Association (AGA) Institute Guideline on Initial Management of Acute Pancreatitis

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TARGET POPULATION: Patients within first 48-72 hours of admission with acute pancreatitis (AP)

Acute pancreatitis (AP) is the most common gastrointestinal discharge diagnosis in the United States, with a mortality rate of 1%-5%.¹ Recent data demonstrate increasing AP-related admissions, making AP management of utmost importance to hospitalists.¹ The American Gastroenterological Association (AGA) guideline specifically addresses AP management in the initial 48-72 hours of admission, during which management decisions can alter disease course and length of stay. AP requires two of the following three criteria for diagnosis: characteristic abdominal pain, elevation of lipase or amylase ≥ 3 times the upper limit of normal, and/or radiographic evidence of pancreatitis on cross-sectional imaging. The guideline provides eight recommendations, which we consolidated to highlight practice changing recommendations: fluids, nutrition, management of the most common causes, and prophylactic antibiotics.^{2,3}

KEY RECOMMENDATIONS FOR THE HOSPITALIST

Fluids

Recommendation 1. In patients with AP, use goal-directed isotonic crystalloids for fluid management (conditional recommendation, very low-quality evidence).

The guideline emphasizes goal-directed fluid management despite low-quality, heterogeneous evidence and does not recommend Ringer's lactate over normal saline. "Goal-directed" fluid management involves the use of crystalloid infusions titrated to improve physiologic and biochemical markers, but no target volume is specified by the guideline. Frequent reassess-

ments should look for signs of volume overload, the primary risk of harm with fluid therapy. Despite failure to reduce mortality or morbidities such as pancreatic necrosis or persistent multi-organ failure, the AGA cites the mortality benefit of goal-directed therapy in sepsis as justification for this approach in AP, given the similar physiologic abnormalities.

Nutrition

Recommendation 2. Begin feeding early in patients with AP regardless of predicted severity. If oral nutrition is not tolerated, enteral feeding with either a nasogastric or nasojejunal tube is preferred to parenteral nutrition (strong recommendation, moderate-quality evidence).

Early feeding (ie, within 24 hours) is recommended regardless of AP severity. This represents a change from prior practices of bowel rest, theorized to prevent continued stimulation of an inflamed pancreas. Although early feeding has not been linked to improved mortality, it has demonstrated lower rates of multi-organ failure and infected pancreatic necrosis, possibly due to maintenance of the gut mucosal barrier and reduced bacterial translocation. When oral feeding is not tolerated, enteral nutrition is preferred over parenteral nutrition due to less risks. The preferred dietary composition guidance for patients with persistent pain or ileus is not addressed.

Management of the Most Common Causes of AP in Adults

Recommendation 3. Patients with mild acute biliary pancreatitis should have cholecystectomy during the initial admission (strong recommendation, moderate-quality evidence).

All patients with suspected biliary pancreatitis should receive a surgical consultation for cholecystectomy during the index admission. At the time of the guideline release, only one trial was available to support the recommendation of early cholecystectomy; however, newer studies similarly support cholecystectomy during index admission by demonstrating reductions in

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composite outcomes of mortality and gallstone-related complications, readmission for pancreatitis, and other pancreatobiliary complications.⁴ A Cochrane review included in the guideline found no differences in complication rates even in patients with severe biliary pancreatitis. In the absence of cholangitis, urgent endoscopic retrograde cholangiography (ERCP) is not indicated as most stones causing biliary pancreatitis pass spontaneously.

Recommendation 4. In patients with acute alcoholic pancreatitis, brief alcohol intervention should occur during admission (strong recommendation, moderate-quality evidence).

Ongoing alcohol consumption is a risk factor for recurrent acute and chronic pancreatitis. Only one trial assessed the impact of inpatient alcohol cessation counseling on recurrent AP, noting a trend toward reduced readmissions.⁵ However, indirect evidence from similar interventions in ambulatory settings demonstrates reductions in alcohol intake, leading to the AGA recommendation for inpatients with alcohol-induced AP.³

Antibiotics

Recommendation 5. Avoid empiric antibiotics in patients with AP who otherwise lack an indication, regardless of predicted severity (conditional recommendation, low-quality evidence).

Since 2002, well performed trials have consistently failed to demonstrate improvement in outcomes such as multi-organ failure or length of stay with use of prophylactic antibiotics for AP, even severe AP and pancreatic necrosis. Therefore, the AGA recommends against prophylactic antibiotics in initial management of AP regardless of disease severity. Lack of blinding in the majority of trial designs conducted before 2002 contributed to the overall assessment of low-quality evidence. The guideline does not address acute biliary pancreatitis with cholangitis, for which antibiotics and ERCP for decompression are critical.

CRITIQUE

The AGA Institute supported this guideline development and employed the rigorous and standardized GRADE (Grading of Recommendations Assessment, Development and Evaluation) methodology. This approach allowed the guideline panel members to account not only for evidence quality, but also the benefits and harms of an intervention and resource utilization. None of the authors had any stated conflicts of interest.

The guideline heavily weighted results from randomized control trials, most of which excluded key populations cared for by hospitalists (eg, patients older than 75 years, with end-stage renal disease). Particular areas where this creates challenges for clinicians and patients alike include goal-directed fluid therapy and when to consider more invasive interventions such as ERCP and early cholecystectomy. For example, patients considered to be poor surgical candidates may benefit from ERCP with biliary sphincterotomy to reduce the risk of recurrent biliary pancreatitis.

Lack of specificity in the guidelines for goal-directed fluid management and enteral feeding regimens makes it challenging to standardize hospitalists' approach to the early care of patients with AP. Interestingly, the 2013 American College of Gastroenterology (ACG) Guideline for the Management of AP included strong recommendations for the use of Ringer's

lactate and volume targets in the initial management of AP.⁶ Evidence supporting the use of Ringer's lactate versus normal saline is based largely upon improved inflammatory markers, theoretical potentiation of pancreatic enzyme activation with hypercholemic metabolic acidosis, and small studies demonstrating trends toward improved mortality.⁷ The ACG guideline was released prior to mounting evidence suggesting that goal-directed fluid therapy in sepsis does not improve mortality versus usual care.⁸ The growing uncertainty regarding the efficacy of goal-directed fluids for septic shock, as well limitations of studies on AP, may contribute to the differences between the AGA and ACG recommendations.

Finally, as the guideline covers the initial therapeutic management of AP, no recommendations are made for diagnostic studies such as right upper quadrant ultrasound. This noninvasive and readily available test plays a critical role in evaluating for presence of gallstones and other potential etiologies of abdominal pain.

AREAS IN NEED OF FUTURE STUDY

Additional research is needed to better understand goal-directed fluid therapy with respect to the fluid type, amount, and target outcomes. Similarly, determining the optimal enteral feeding regimens for patients failing oral intake would help clinicians meet the recommendation for early nutrition. Finally, clarification on the roles and timing of endoscopic and surgical procedures for patients with severe biliary pancreatitis, as well as geriatric and medically complex populations, would help hospitalists advocate for a multidisciplinary approach to this common and often serious disease.

Disclosures: The authors have nothing to disclose.

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