

## PANCREAS NEWS

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# Management of Acute Pancreatitis: “PANCREAS” Contains Eight Easy Steps to Remember the Treatment

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The most recent evidence-based medical findings for the management of acute pancreatitis has prompted us to propose the acronym “PANCREAS” (Perfusion, Analgesia, Nutrition, Clinical assessment, Radiological assessment, ERCP, Antibiotics, and Surgery) for easy remembrance and management in daily medical practice.

### The PANCREAS Acronym

**Perfusion:** Fluid resuscitation to maintain urine output between 0.5 and 1.0 mL/kg/h. Oxygenation in order to keep saturation greater than 95% in severe pancreatitis [1].

**Analgesia:** Patient-controlled analgesia or traditional on demand analgesia including opioids [2].

**Nutrition:** Enteral feeding within 48 hours (plus/minus nasojejunal feeding) lowers mortality in severe acute pancreatitis [3].

**Clinical:** Bisap [4], APACHE II [5] or APACHE-O [6] scores for assessment and triage of cases. Management in high dependency areas or intensive care units according to the severity of the pancreatitis [7].

**Radiology:** Ultrasonography to detect gallstones, choledocholithiasis and local complications. Contrast-enhanced computed tomography (CECT) after 48-72 hours of pain onset to determine the degree and extent of necrosis. Percutaneous catheter drainage guided by ultrasound and CECT is helpful in the management of necrosis and also in bridging the time until surgery [8].

**ERCP:** To be carried out within 72 hours if cholangitis or severe acute pancreatitis with persistent obstruction exists [9].

**Antibiotics:** There is little evidence to support the role of prophylactic antibiotics for the prevention of infected necrosis. Empirical antibiotics may be started if infection is suspected. Percutaneous ultrasound or CT-guided aspiration for gram staining and culture sensitivity should orient the choice of antibiotics [10].

**Surgery:** Multi organ failure with necrosis not responding to conservative management including percutaneous catheter drainage, pseudo-aneurysm of the surrounding vessels with bleeding, infected necrosis, pancreatic abscess and bowel perforation [1, 2, 8].

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### References

1. American Gastroenterological Association (AGA) Institute. AGA institute medical position statement on acute pancreatitis. *Gastroenterology* 2007; 132:2019-21. [PMID 17484893]
2. Wu BU, Conwell DL. Acute pancreatitis part I: approach to early management. *Clin Gastroenterol Hepatol* 2010; 8:410-6. [PMID 19896558]
3. Al-Omran M, Albalawi ZH, Tashkandi MF, Al-Ansary LA. Enteral versus parenteral nutrition for acute pancreatitis. *Cochrane Database Syst Rev* 2010; 1:CD002837. [PMID 20091534]
4. Singh VK, Wu BU, Bollen TL, Repas K, Maurer R, Johannes RS, et al. A prospective evaluation of the bedside index for severity in acute pancreatitis score in assessing mortality and intermediate markers of severity in acute pancreatitis. *Am J Gastroenterol* 2009; 104:966-71. [PMID 19293787]
5. Khan AA, Parekh D, Cho Y, Ruiz R, Selby RR, Jabbour N, et al. Improved prediction of outcome in patients with severe acute pancreatitis by the APACHE II score at 48 hours after hospital admission compared with the APACHE II score at admission. Acute physiology and chronic health evaluation. *Arch Surg* 2002; 137:1136-40. [PMID 12361419]

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**URL** <http://www.serena.unina.it/index.php/jop/article/view/3446/3778>

6. Johnson CD, Toh SK, Campbell MJ. Combination of APACHE-II score and an obesity score (APACHE-O) for the prediction of severe acute pancreatitis. *Pancreatology* 2004; 4:1-6. [PMID 14988652]
  7. Hasibeder WR, Torgersen C, Rieger M, Dünser M. Critical care of the patient with acute pancreatitis. *Anaesth Intensive Care* 2009; 37:190-206. [PMID 19400483]
  8. van Santvoort HC, Besselink MG, Bakker OJ, Hofker HS, Boermeester MA, Dejong CH, et al. A step up approach or open necrosectomy for necrotizing pancreatitis. *N Engl J Med* 2010; 362:1491-502. [PMID 20410514]
  9. Petrov MS. Early use of ERCP in acute biliary pancreatitis with(out) jaundice: an unjaundiced view. *JOP. J Pancreas (Online)* 2009; 10:1-7. [PMID 19129608]
  10. Villatoro E, Mulla M, Larvin M. Antibiotic therapy for prophylaxis against infection of pancreatic necrosis in acute pancreatitis. *Cochrane Database Syst Rev* 2010; 5:CD002941. [PMID 20464721]
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