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## CLINICAL COURSE AND DIAGNOSTIC APPROACHES OF ACUTE PANCREATITIS

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**Abstract:** This article discusses the clinical course and diagnostic approaches of acute pancreatitis, an inflammatory condition of the pancreas that can range from mild self-limiting disease to severe life-threatening complications. The study examines the etiology, pathophysiology, clinical manifestations, and progression of acute pancreatitis, with particular attention to common causes such as gallstones, alcohol abuse, metabolic disorders, and infections. The article highlights the importance of early diagnosis and accurate assessment of disease severity in improving patient outcomes. Diagnostic methods including clinical evaluation, laboratory investigations, serum amylase and lipase measurements, ultrasonography, computed tomography (CT), magnetic resonance imaging (MRI), and endoscopic techniques are analyzed. Furthermore, the paper explores current classification systems and prognostic criteria used in clinical practice. The findings emphasize that timely diagnosis and appropriate management are essential for reducing complications, mortality, and improving the quality of patient care.

**Keywords:** acute pancreatitis, pancreatic inflammation, diagnostic approaches, clinical course, serum amylase, serum lipase, computed tomography, magnetic resonance imaging, ultrasonography, endoscopic diagnosis, gallstones, alcohol-related pancreatitis, pancreatic disorders, prognosis, complications, inflammatory diseases.

Acute pancreatitis is a clinically significant gastrointestinal disorder characterized by high morbidity and considerable mortality rates. The increasing global incidence of the disease is primarily associated with gallbladder diseases, alcohol consumption, and metabolic syndrome-related factors. According to contemporary classification systems, acute pancreatitis is divided into mild, moderately severe, and severe forms, with severity mainly determined by the development of organ failure and local complications. The 2012 "Revised Atlanta Classification" standardized the disease based on clinical and radiological criteria and significantly improved diagnostic approaches. In addition, early severity assessment and prognostic scoring systems (BISAP, Ranson, APACHE II) play a crucial role in clinical decision-making. A deeper understanding of the complex pathogenesis of the disease is essential for improving modern diagnostic and therapeutic strategies.

**Aim of the study.** To systematically analyze the clinical course and modern diagnostic criteria of acute pancreatitis based on current scientific literature.

**Materials and methods.** This literature review was based on systematic reviews, meta-analyses, and international consensus documents indexed in Scopus, PubMed, and Web of Science databases from 2012 to 2025. The search strategy included

keywords such as “acute pancreatitis,” “clinical course,” “diagnosis,” “Revised Atlanta Classification,” “BISAP score,” and “Ranson criteria.”

**Results and discussion.** The analysis shows that the diagnosis of acute pancreatitis is currently based on three major criteria: epigastric pain, serum amylase/lipase levels elevated more than three times the upper limit of normal, and characteristic imaging findings on CT/MRI. The clinical course is divided into a biphasic model: early (first 1–2 weeks) and late phases. In the early phase, systemic inflammatory response syndrome (SIRS) and organ dysfunction represent the main prognostic indicators.

According to the 2012 Revised Atlanta Classification, disease severity is defined by the duration of organ failure (>48 hours), which is considered the primary criterion for severe acute pancreatitis.

Meta-analyses have demonstrated that the BISAP score has high predictive value for mortality and severe disease in the early stage, with a mean AUC of approximately 0.80. The Ranson and APACHE II scoring systems are also widely used; however, their limitations—such as delayed availability of results and complexity of calculation—make BISAP a more practical option in clinical settings.

In radiological diagnostics, contrast-enhanced computed tomography (CT) is the gold standard, providing high accuracy in detecting necrosis, peripancreatic fluid collections, and walled-off necrosis. Magnetic resonance imaging (MRI) offers additional value in soft tissue differentiation.

Overall, modern diagnostic strategies are based on the integration of clinical, laboratory, and radiological criteria, enabling early stratification and individualized patient management.

**Conclusion.** Acute pancreatitis is a dynamic, phase-dependent disease in which early diagnosis is a key determinant of prognosis. Contemporary classification and scoring systems optimize clinical decision-making. An integrated diagnostic approach is essential for early severity assessment and reduction of mortality rates.



### References:

1. Banks, P. A., Bollen, T. L., Dervenis, C., et al. (2013). Classification of acute pancreatitis—2012: Revision of the Atlanta classification and definitions by international consensus. *Gut*, 62(1), 102–111. <https://doi.org/10.1136/gutjnl-2012-302779>
2. Sarr, M. G., Banks, P. A., Bollen, T. L., et al. (2013). The new revised classification of acute pancreatitis 2012. *Surgical Clinics of North America*, 93(3), 549–562. <https://doi.org/10.1016/j.suc.2013.02.012>
3. Gao, W., Yang, H. X., & Ma, C. E. (2015). The value of BISAP score for predicting mortality and severity in acute pancreatitis: A meta-analysis. *PLOS ONE*, 10(6), e0130412. <https://doi.org/10.1371/journal.pone.0130412>
4. Banks, P. A., Bollen, T. L., Dervenis, C., Gooszen, H. G., Johnson, C. D., Sarr, M. G., Tsiotos, G. G., & Vege, S. S. (2013). Classification of acute pancreatitis—2012: Revision of the Atlanta classification and definitions by international consensus. *Gut*, 62(1), 102–111. <https://doi.org/10.1136/gutjnl-2012-302779>
5. Mederos, M. A., Reber, H. A., & Girgis, M. D. (2021). Acute pancreatitis: A review. *JAMA*, 325(4), 382–390. <https://doi.org/10.1001/jama.2020.20317>
6. Leppäniemi, A., Tolonen, M., Tarasconi, A., Segovia-Lohse, H., Gamberini, E., Kirkpatrick, A. W., et al. (2019). 2019 WSES guidelines for the management of severe acute pancreatitis. *World Journal of Emergency Surgery*, 14, 27. <https://doi.org/10.1186/s13017-019-0247-0>
7. Peery, A. F., Crockett, S. D., Murphy, C. C., Lund, J. L., Dellon, E. S., Williams, J. L., et al. (2019). Burden and cost of gastrointestinal, liver, and pancreatic diseases in the United States. *Gastroenterology*, 156(1), 254–272.e11. <https://doi.org/10.1053/j.gastro.2018.08.063>
8. Goo, D. E., Kim, Y. K., & Kim, H. J. (2020). Imaging of acute pancreatitis and its complications. *Radiographics*, 40(7), 1905–1926. <https://doi.org/10.1148/rg.2020200015>
9. Wu, B. U., Johannes, R. S., Sun, X., Tabak, Y., Conwell, D. L., & Banks, P. A. (2008). The early prediction of mortality in acute pancreatitis: A large population-based study. *Gut*, 57(12), 1698–1703. <https://doi.org/10.1136/gut.2008.152702>
10. Lankisch, P. G., Apte, M., & Banks, P. A. (2015). Acute pancreatitis. *The Lancet*, 386(9988), 85–96. [https://doi.org/10.1016/S0140-6736\(14\)60649-8](https://doi.org/10.1016/S0140-6736(14)60649-8)
11. Thoeni, R. F. (2012). The revised Atlanta classification of acute pancreatitis: Its importance for the radiologist and its effect on treatment. *Radiology*, 262(3), 751–764. <https://doi.org/10.1148/radiol.11110947>
12. Bollen, T. L., van Santvoort, H. C., Besselink, M. G., van Leeuwen, M. S., Horvath, K. D., & Gooszen, H. G. (2007). The Atlanta classification of acute pancreatitis revisited. *British Journal of Surgery*, 94(2), 187–194. <https://doi.org/10.1002/bjs.5778>