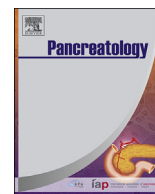




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Guideline adherence in acute pancreatitis: Still a long way to go

Large-scale nationwide studies offer valuable insights into variations in clinical characteristics, management practices, and disease outcomes among different countries and geographical regions. By examining a broad spectrum of patients and healthcare settings, these studies provide a comprehensive understanding of how factors such as demographics, healthcare infrastructure, and cultural influences impact the presentation and management of various medical conditions, including acute pancreatitis (AP). In the current issue of *Pancreatology*, Köskal et al. reported clinical characteristics of AP and physicians' adherence to international guidelines in their nationwide multicenter study from Turkey [1]. The prospective cohort study included 2144 patients and was conducted across 17 tertiary care centers, offering a rich dataset for comparing the clinical characteristics and management practices of AP in Turkey to those of other populations globally. There are some interesting observations that stand out from this study.

Biliary etiology was the predominant cause of pancreatitis (67.1%) in the study from Turkey [1], and patients with biliary pancreatitis had less severe disease as compared to patients with non-biliary etiologies. A more favorable outcome of biliary AP has also been observed in other studies reporting lower rates of organ failure and mortality in biliary pancreatitis compared to other aetiologies [2,3]. However, the high prevalence of biliary disease and very low prevalence of alcohol-related AP (4.2%) stand out as notable findings from the study. Several explanations may account for these observations. Firstly, the lower prevalence of alcohol-related AP may be grounded in cultural traditions with lower alcohol consumption in Turkey compared to other countries. Additionally, biological factors such as genetic susceptibility to AP may play a role. This aligns with observations in other areas of pancreatology, where the leading cause of pancreatitis varies based on genetic factors and cultural influences. For example, in India, idiopathic chronic pancreatitis, a condition potentially linked to a higher frequency of specific genetic mutations in genes coding anti-proteases, is more prevalent than alcohol-related chronic pancreatitis, which is more commonly seen in Western nations [4]. Lastly, the low frequency of alcohol-related pancreatitis in the Turkish study might be influenced by a selection bias. As such, patients with alcohol dependency issues might be less likely to seek or receive in-hospital medical care, leading to an underrepresentation of alcohol-related cases in the study.

Another finding that stands out in the study from Köskal et al. is the very low proportion of patients developing severe AP (as per revised Atlanta criteria). Hence, severe AP was present in only 2.6% of patients and necrotizing pancreatitis in 4.7% of patients, which is much lower as compared to other nationwide studies or large multicenter cohort studies. For example, in a Japanese

nationwide survey, 23.6% of patients had severe AP, and in a recent multicenter study including 22 centers from North America, India, Europe, and Latin America, 12% of patients had severe disease [5,6]. A plausible explanation for the low incidence of severe disease in the study by Köskal et al. might be the higher prevalence of biliary etiology and lower prevalence of alcohol-related AP as compared to other population-based studies.

Organ failure is an important determinant of the outcome in AP. Köskal et al. reported renal failure as the most common type of organ failure, followed by respiratory failure. This is in contrast to other studies in the field, where respiratory failure has consistently been reported to be the most common type of organ failure, followed by renal failure and cardiovascular failure [7,8]. There is no clear explanation for this discrepancy, but the small sample size of patients with severe AP may have led to a spurious finding.

The mortality in patients with severe AP was 50% in the study from Turkey, which is in line with findings from other studies reporting mortality rates of 38–42% among patients with severe AP and even higher rates in patients with infected necrosis and persistent organ failure [7,9]. This verifies the fact that irrespective of variations in the incidence of AP severity, the ultimate outcome (i.e., death) remains the same after the development of organ failure. Despite advancements in critical care and organ support measures, there has been little improvement in reducing the mortality rate observed during the early phase of severe AP [10]. This contrasts with the notable shift in the management of infected pancreatic necrosis over the past two decades, where a move towards a conservative, step-up intervention approach has led to improved patient outcomes [11–14]. The ongoing high mortality rate in the early phase of AP is likely attributed to the lack of targeted disease-modifying therapy that can effectively intervene during the initial crescendo stage of the disease.

In addition to providing detailed information on the AP population in Turkey, the study also provided valuable insights into real-world management and how this deviates from current international evidence-based guidelines. A number of important observations were made. Firstly, among patients with mild biliary AP, only 4.4% of the patients were offered cholecystectomy during the index hospitalization. A recent multicenter randomized controlled trial highlighted that compared with interval cholecystectomy, same-admission cholecystectomy reduced the rate of recurrent gallstone-related complications in patients with mild gallstone pancreatitis, with a very low risk of cholecystectomy-related complications [15]. Secondly, in patients who developed pancreatitis following endoscopic retrograde cholangiopancreatography (ERCP), less than half of them received prophylactic non-steroid anti-inflammatory drug (NSAID) treatment prior to the procedure

despite the established efficacy of this treatment [16]. Thirdly, most of the patients underwent computed tomography (CT) scans within the first 24 hours of diagnosis of AP, although this is only indicated in cases with diagnostic uncertainty [17]. Finally, prophylactic antibiotics were administered in 38.3% of patients, although this has for many years been known to be an obsolete treatment that may even worsen the prognosis of patients [18]. Collectively, these findings underscore the challenges surrounding the implementation of evidence-based medicine and guidelines in clinical practice.

In conclusion, the study conducted by Köskal et al. offers valuable insights into AP characteristics from Turkey, a geographic area that has not received extensive attention in the literature before. This sheds light on the diverse nature of AP in terms of causes and presentation across different regions worldwide. An important takeaway from the study is the evident necessity for better integration of evidence-based medicine and guidelines into clinical practice. Given the lack of effective disease-modifying treatments, adherence to preventive measures such as in-hospital cholecystectomy for mild biliary AP and NSAID prophylaxis for preventing post-ERCP pancreatitis becomes crucial. Moreover, it is essential to reconsider the use of unnecessary diagnostic procedures (such as CT scans without clear indications) and potentially harmful treatments (like antibiotics without clear signs of infection) in modern AP management. Similar to the challenge often observed in translating novel findings from basic science to clinical research, there is a critical need to bridge the gap between evidence-based guidelines and their implementation in clinical practice. This emphasizes the importance of focusing efforts on improving the translation of guidelines into everyday patient care to enhance outcomes in AP management.

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