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Acute pancreatitis: an opportunity for gastroenterology hospitalists?

Javier A. Cienfuegos[1,2,3], Víctor Valentí[1,2,3], and Fernando Rotellar[1,2,3]

[1]Department of General Surgery. Clínica Universidad de Navarra & Facultad de Medicina. Universidad de Navarra. Pamplona, Spain. [2]Instituto de Investigación Sanitaria de Navarra (IdisNA). Pamplona. Spain. [3]CIBER Fisiopatología de la Obesidad y Nutrición (CIBERobn). Instituto de Salud Carlos III. Madrid, Spain

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Acute pancreatitis (AP) is the third most frequent cause of hospital admissions for digestive disorders in the US and Europe after digestive bleeding and cholelithiasis/cholecystitis (1,2). The incidence of AP ranges from 15 to 100 cases per 100,000 inhabitants per year, and has been steadily increasing in recent years (2,3). In Spain, the reported incidence is 72 patients per 100,000 inhabitants per year (4). The most frequent cause is biliary lithiasis (50 %-60 % of cases); fortunately, 80 % of patients have only mild symptoms—as defined by the revised Atlanta Classification—and progress favorably, although mortality rate is 4.2 % (2,5,6). Clinical guidelines explicitly indicate that laparoscopic cholecystectomy should be performed during the first 48-72 hours or at the time of hospital admission in mild cases of biliary

origin (6,7).

However, only 30 %-40 % of patients with mild AP undergo surgery within this time frame or at the time of hospital admission (8). Delay in performing cholecystectomy has been associated with recurrence of biliary symptoms such as cholecystitis and biliary colic (23 %), acute pancreatitis (15.5 %-20 %), 90-day hospital readmission (15 %-20 %), and even increased mortality (2,8,9). The cost of each readmission has been estimated at € 2,856 (10).

Parra-Membrives et al. (11) report in this issue the incidence of biliary complications, recurrent pancreatitis, and hospital readmission in a cohort of 104 patients (median age, 82 years; range, 27-96 years) with AP of biliary origin who did not undergo cholecystectomy early or at the time of admission. Seventy-six patients (73 %) had mild pancreatitis, 23 (22.1 %) had moderate-to-severe disease, and 5 (4.8 %) had severe disease (5).

With a median follow-up of 37 months (range: 1-70), seven patients (6.7 %) died before surgery—6 (5.8 %) of them because of recurrent AP or sepsis of biliary origin—and 48 (46.2 %) required 3 or more readmissions. Of the 76 mild cases of AP, 21 (27.6 %) went on to develop biliary complications, and 12 (15.7 %) new episodes of pancreatitis. Of the 23 cases of moderate-to-severe disease, 11 (47.8 %) and 10 (43.5 %) experienced recurrent episodes of biliary complications and pancreatitis, respectively. Of the five cases of severe disease, the corresponding figures were 2 (40 %) and 1 (20 %), respectively.

In the univariate analysis the authors found baseline bilirubin levels as risk factors for biliary complications ($p = 0.033$), and both disease severity ($p = 0.02$) and a bile-duct diameter > 10 mm as risk factors for recurrent pancreatitis. The authors report that the likelihood of suffering a recurrence of pancreatitis was 15 %, 24 %, and 32 % at 1, 3 and 5 years, respectively, and that the likelihood of suffering biliary complications was 16 %, 29 %, and 43 % over the same period of time.

This excellent study clearly highlights an area with room for improvement, which could add great value to the management of complicated digestive disorders such as acute pancreatitis, which follow a heterogeneous clinical path and have a high mortality rate (2,10,12,13).

Value is the quotient of the results obtained for safety (complications), appropriate care at the time of diagnosis (early cholecystectomy), length of hospital stay, rate of readmission, and patient satisfaction, among other factors, as divided by cost (13). It is imperative to improve results with the lowest cost possible, and this endeavor has become one of the cornerstones of medical care in the 21st century, which must be safe, effective, patient-centered, timely, and equitable (14).

In their study, Parra-Membrives et al. (11) report that in 24 % of AP cases cholecystectomy was not performed either early or at the time of admission, which is consistent with the data reported by most studies (8). The authors report that the patients, after being diagnosed, are admitted to the Gastroenterology or Internal Medicine Department, and then the Surgery Department is consulted to perform cholecystectomy. Could this process be shortened? By how much is definitive treatment with laparoscopic cholecystectomy delayed from the time of initial diagnosis?

Without doubt, the management of AP can be complex, especially in patients with multiple disorders (note the median age of the patients in the study was 82 years), and may benefit from the implementation of recent organizational reforms such as the creation of "gastroenterology hospitalists" (15). These would be gastroenterologists with experience in the management of complex patients, with full dedication, and skilled in endoscopy and ultrasound techniques (16-18).

In this way, faster communication between the other departments involved (Surgery, Radiology, Anesthesia, Intensive Care) is facilitated while at the same time ensuring a department's outpatient services by other colleagues (15). The establishment of intermediate care units (IMCs) or of "step-up" or "step-down" units would be desirable, in which these patients could be monitored without need for admission to an intensive care unit with the resulting increased cost (19).

What timidly began as a "movement" in Internal Medicine in California (USA) in the 1990s has now become a consolidated model yielding outstanding results in other specialties, including Surgery, Orthopedics, Gynecology, and Neurology (20-22). In the United States, 75 % of hospitals have these programs. In all settings the incidence of complications, length of hospital stay, and hospital readmissions decreased; timely

care and degree of satisfaction of both patients and healthcare professionals improved; and hospital costs were reduced (23-25). Experience recently gained from the SARS-CoV-2 pandemic has shown its efficacy and its ability to flexibly adapt to situations in which healthcare systems are under great strain.

Given the space limitations, we cannot expound further on the implications and the pros and cons of implementing a gastroenterology hospitalists program (Fig. 1). We believe that—as has occurred in other specialties—such organizational structures will be set up in the future with the corresponding benefits for patients and healthcare systems.

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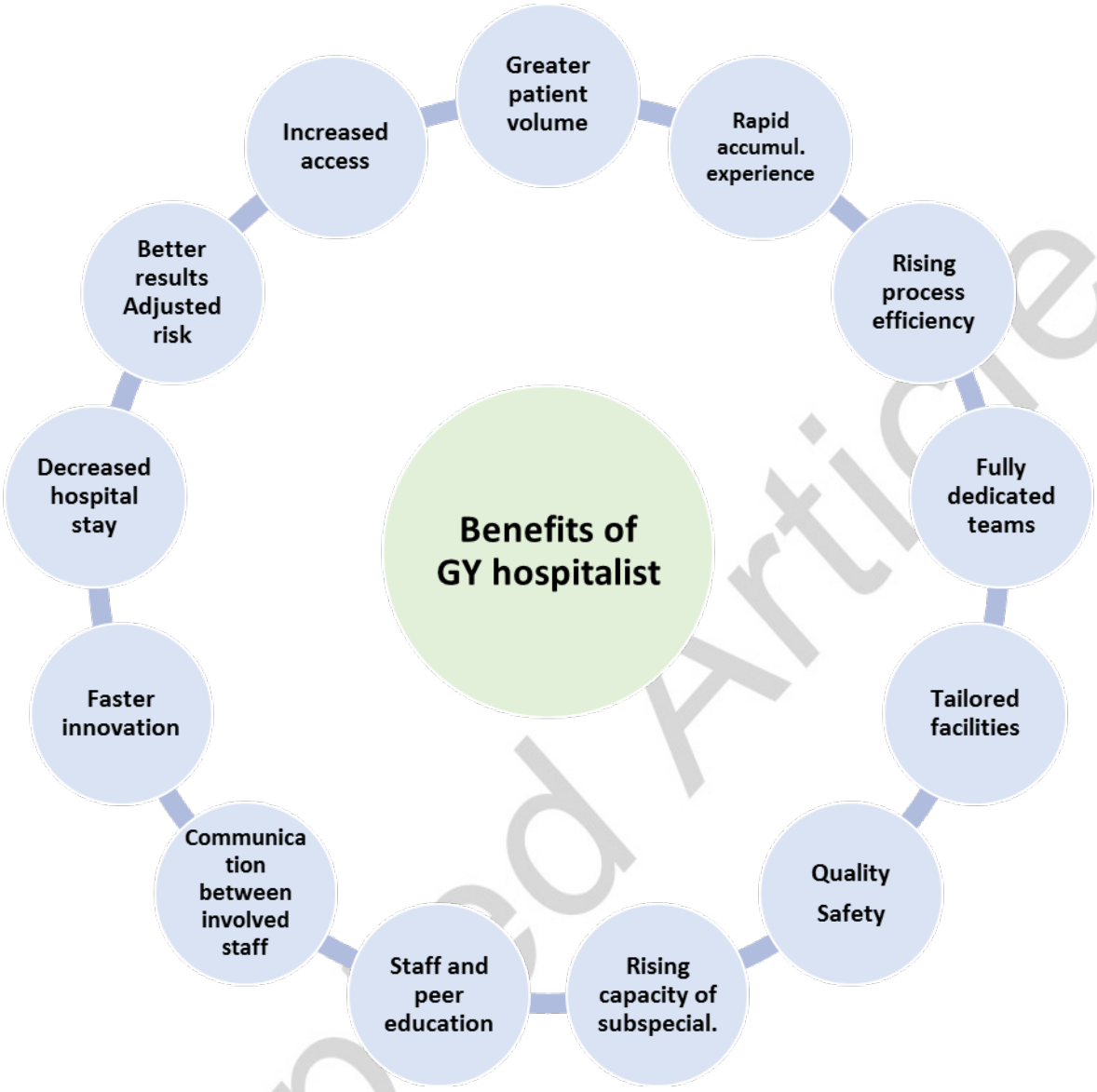

Potential advantages and disadvantages of GY hospital

Advantages	Disadvantages
Timely inpatient care	Possible fraction of care
Improved access to endoscopy	Physician burnout
Improved emergency department average	Cost of hiring hospitalists
Improved patient outcomes	Loss of acute care skills in outpatient physicians
Reduced lenght of hospitalitation	
Improved quality of care	
Advanced inpatient GI research	
Leverage of trainee education	
Avoid overuse diagnostic tools	
Improved high-value delivery system	

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Fig. 1. The Virtuous Circle integrated in a Gastroenterology Hospitalist Model, with "pros and cons". Adapted from Michael Porter in: Michael E. Porter, Elizabeth Olmsted Teisberg. Redefining Health Care; Creating Value-Based Competition on Results. Harvard Business School Press Boston (MA); 2006. pp. 97-148.