

EVALUATION OF THE SURGICAL TREATMENT IN THE ACUTE PANCREATITIS

DAN CREȚU¹, R. HULPUȘ², D. SABĂU³

^{1,2} PhD Candidate "Lucian Blaga" University of Sibiu, University "Lucian Blaga" of Sibiu

Keywords: scoring system, surgical treatment, miniminvasive

Abstract: This study focused on assessing reliability means diagnostic, treatment and complications of acute pancreatitis predictibility (depending on scoring systems). Currently, there is a tendency towards an attitude as conservative but the role of surgery is not settled. Motivated by this, I found useful to study the indication of surgery, correlations between the used surgical technique and postoperative complications. The study was conducted on a sample of 96 cases from January 2005 to July 2010. The purpose of this study was to evaluate surgical methods applied in the treatment of acute pancreatitis and to propose a therapeutic algorithm.

Cuvinte cheie: sisteme de scor, tratament chirurgical, miniinvasiv

Rezumat: Studiul de față s-a axat pe evaluarea fiabilității mijloacelor diagnostice, de tratament și a predictibilității complicațiilor pancreatitei acute (în funcție de sistemele de scor). Actualmente, se tinde spre o atitudine cât mai conservativă, dar locul chirurgiei nu este stabilit definitiv. Motivați de acest aspect, am considerat de un real folos studierea indicațiilor operatorii, corelațiile între tehnica chirurgicală folosită și eventualele complicații postoperatorii. Studiul s-a efectuat pe un lot de 96 de cazuri în perioada ianuarie 2005 - iulie 2010. Scopul studiului este de a evalua metodele de tratament chirurgical aplicate în terapia pancreatitei acute și de a propune un algoritm terapeutic.

INTRODUCTION

Acute pancreatitis is an expression of anatomico-clinical syndrome of acute pancreatic and peripancreatic selfdestructive caused by gall stones, alcohol, infectious factors and other causes still undetermined. It continues to provoke controversy diagnostic and therapeutic dilemmas and major that reflects:

- The complexity of pancreatic autodigestie and insufficient knowledge of its pathogenetic and pathophysiological aspects, the relative inaccessibility of the gland to the exploration of clinical and laboratory experimental data and the impossibility of extrapolation to humans;
- Clinical and evolutive polymorphism of the disease, acute pancreatitis is actually a group of distinct entities as the etiology, clinical manifestations and natural history, even if the clinical expression may be identical or similar to a time, each form is unique in terms of pathogenesis and natural history;
- Dismal therapeutic results reported in severe forms, despite progress made in the last decade, biochemical and imaging in the diagnosis, intensive therapy and surgical treatment.

THE AIM OF THE STUDY

Improving surgical treatment in patients with acute pancreatitis by introducing mini invasive techniques and the development of diagnostic and treatment algorithms.

Estimate early and distant results of surgical treatment of patients with acute pancreatitis, after different surgical procedures, even after the mini invasive and comparative evaluation of the results of the conservative treatment.

MATERIAL AND METHOD

In developing the present study, we used the database

of Sibiu County Hospital.

The study is prospective and retrospective and includes patients with acute pancreatitis admitted to the Surgical Clinic I and II in the period January 2005 - July 2010, a total of 96 cases.

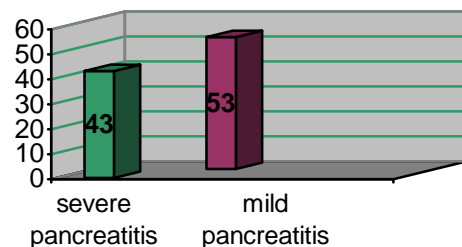
In the present study we examined etiological aspects of IP issues and we evaluated conservative and surgical treatment and therapeutic tactics used.

They excluded patients with chronic pancreatitis, those with a history of acute pancreatitis and those who died within 48 hours of hospitalization.

Protocol treatment of the patient data collection consisted of history, clinical, laboratory (HLG, proteinemia, liver and kidney samples, amylasemia, gas meter, water-balance 48-hour urine) and radiological (chest radiography and abdominal plain radiography, abdominal ultrasound and CT).

RESULTS AND DISCUSSIONS

Figure no 1. Graphic representation of the number of pancreatitis types



A. Presentation of the lot

- The mean age was 43 years.

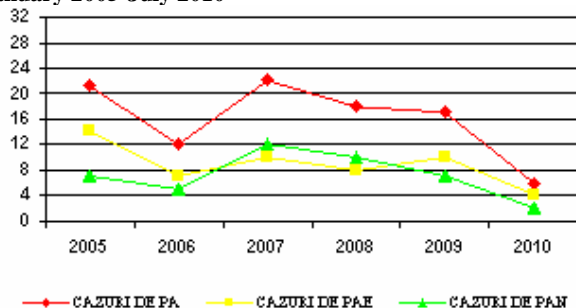
¹Corresponding Author: Dan Crețu, 48, Tilișca street, Sibiu, România; e-mail: dancretzu76@yahoo.com; tel +40-0721588755
 Articol received on 28.05.2010 and accepted for publication on 21.06.2010
 ACTA MEDICA TRANSILVANICA December 2010; 2(4)pagina pagina

CLINICAL ASPECTS

- Distribution of the average 57% urban origin and 43% rural
- The distribution by sex 67% men and 33% women.

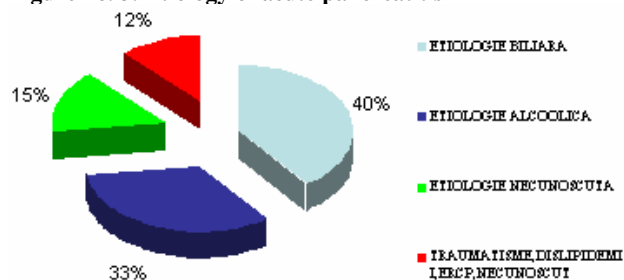
Types of pancreatitis in the 96: 43 severe pancreatitis, mild pancreatitis 53 according to the classification Atlanta .

Figure no. 2. The incidence of acute pancreatitis between January 2005-July 2010



B. Analysis of the etiology of acute pancreatitis in our study group

Figure no. 3. Etiology of acute pancreatitis



C. Analysis of issues encountered in laboratory examinations in acute pancreatitis.

a. Changing the amylase

In the study, a total of 96 patients diagnosed, amylase values were:

- In two cases below normal, with no diagnostic significance;
- In 40 cases with normal values, no diagnostic value;
- In 8 cases than normal, but not to exceed three times the normal values of amylase;
- In 46 cases three times higher values compared to normal values which indicates a possible pancreatitis;

These data show that a total of 46 (47.9%) of cases proved to be a useful test for diagnosis of acute pancreatitis orientation

b. Change the values of C-Reactive Protein

One of the parameters used in the detection of inflammatory processes is represented by C-reactive protein. The disadvantage of this test is the fact that it shows specificity in the diagnosis of acute pancreatitis, but oriented towards the diagnosis of inflammatory syndrome, establishing the correct diagnosis by corroborating the results of all investigations.

In the study group from the analysis of results showed the following:

- In 9 cases were recorded of C-reactive protein levels below 6 mg / l, that is normal;
- In 73 cases there were C-reactive protein values between 6-120 mg / l, that is proving the presence of an inflammatory process;
- In 14 cases there were values of C-reactive protein 120 mg / l, which focused on a diagnosis of high severity.

a. c. Ranson score

Since laboratory examinations of acute pancreatitis

are many, we decided to use as a criterion for staging acute pancreatitis.

Ranson score particular importance is a prognostic and directions to the type of treatment to be applied, rather than a diagnosis, so that, as literature can be judged from data obtained in our study group mortality rate. Thus in our study group have met the following values:

- 68 of patients diagnosed with acute pancreatitis had a mortality rate of 2%;
 - 9 of the patients diagnosed with acute pancreatitis had a mortality rate of 15%;
 - 14 of the patients diagnosed with acute pancreatitis had a mortality rate of 40%;
 - 5 of the patients diagnosed with acute pancreatitis have a mortality rate of 100%;
- b. Scorul Baltazar

Table no. 1. Staging according to the score Baltazar

| Score Baltazar | A | B | C | D | E |
|----------------|----|----|---|----|----|
| Cases No | 12 | 44 | 8 | 21 | 11 |

Depending on the exploration results obtained by CT were obtained the following results:

- 12 patients had CT exploring a normal pancreas;
- 44 patients had CT exploring a volume growth of the pancreas gland with preservation of contour;
- 8 patients showed inflammation of the pancreas CT exploration had created with peripancreatic fat and loss accounts;
- In 21 patients CT was found after exploring the presence of peripancreatic collections;
- In 11 patients CT was found after exploring the presence of peripancreatic fluid collections and more away from the pancreas;

Figure no. 4. Score Baltazar C –layout (arrows indicate areas of pancreatic and peripancreatic inflammation)

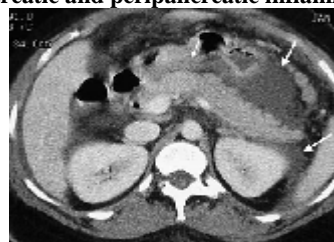


Figure no. 5. Score Layout Baltazar-layaout (arrow indicates existing peripancreatic collection)



D. Analysis of treatment in study group

In the study group an important role in the conduct of play therapy applied to the severity of acute pancreatitis. According to data collected from specialized literature we concluded that acute pancreatitis has basically two forms: a mild form that responds well before a conservative treatment, but may be used depending on the etiology and surgical treatment, and a severe form in which surgical treatment should be

CLINICAL ASPECTS

instituted.

Variants of therapeutic approaches

- 52 cases were treated by open surgery
- 16 cases conservative
- 28 cases treated laparoscopically
- a. Information-open operators
- Early Operations
- Acute Abdomen: 18/52 (34.6%)
- Late Operations
- Proven or suspected infected necrosis: 22/52 (42.3%)
- Evolution unfavorable conservative treatment + /-local complications: 12/52 (23.1%)

Table no. 2. Early surgery (within 12 days)

| Operation Type | No. cases |
|--|-----------|
| Cholecystectomy + Drainage | 4 |
| Cholecystectomy + choledochotomy + Kehr drainage | 10 |
| Cholecystectomy + drainage necrotomy j | 5 |
| Necrectomy + open drainage (laparostomy) | 3 |
| Drainage laparotomy | 4 |

Table no. 3. Surgical interventions delayed more than 12 days

| Operation Type | No. cases |
|---|-----------|
| Drainage of pancreatic collections / peripancreatic | 8 |
| Pancreatic drainage necrectomy abscess | 4 |
| Necrectomy + lavage / continuous aspiration | 4 |
| Retroperitoneostomie necrectomy + + lavage / aspiration continues | 3 |

b. Laparoscopic surgery

- 10 cases cholecystectomy + transcystic drainage
- 12 cases of laparoscopic cholecystectomy
- Cholecystostomy 8 cases
- • Laparoscopy with drainage of the peritoneal cavity in 3 cases
- Laparoscopic drainage Pancreatic necrectomy + colecistostomy
- CT guided percutaneous drainage - 3 and 2 pancreatic abscess and pancreatic pseudocysts

E. The analysis of patients in the study group.

The evolution was marked with favorable or unfavorable evolution taking into account the entire period of hospitalization, but especially given the time of discharge prognosis.

The global evolution of the batch analysis shows that a total of 81 patients (84.87%) had a favorable evolution, and that 16 cases (15.13%) had an unfavorable evolution. Of those patients treated conservatively 16 patients (100%), 13 (82%) had a favorable evolution, and only three patients nevaforabila.

Of the 80 patients who received surgery set 61 (76%) have evolved favorably while 19 patients nevaforabil.

F. Analysis of complications in our study group

Of the 96 cases 27 (28%) had general complications, and 23 local complications

Average days of hospitalization was distributed as follows: in patients with laparoscopic treatment was 14.2 days, in those treated surgically was 28.2 days classic, and those with conservative treatment was 20.3 days.

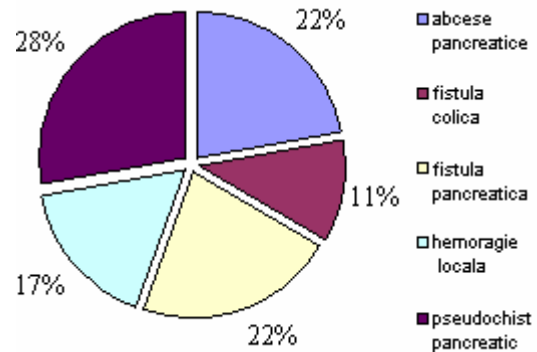
Postoperative mortality was 16% in the general group.

Mortality distribution after treatment types was as follows:

- 17.2% Conservative Treatment
- 18.4% Open Surgery

- 11.7% Laparoscopic..

Figure no. 6. Frequency of different types of local complications



CONCLUSIONS

Acute pancreatitis remains a disease with an unpredictable evolution and high seriousness sometimes fatal

Treatment of acute pancreatitis requires complex approach, multidisciplinary, involving the surgeon, gastroenterologist, radiologist and specialist ATI

Currently, improve patient with critics, many patients with severe acute pancreatitis survive the initial phase of systemic inflammatory response and enters the second phase, dominated by septic complications and consequences of multiple organ dysfunction

Optimal treatment is tailored to each individual case with the mention of accreditation ideas of "therapeutic window", and laparoscopic treatment

BIBLIOGRAPHY

1. Ghidirim Gh., Gagauz I., Misin I. Și coaut., Pancreatita necrotică; Chirurgia (București). 2005; 100(3): 341-344. (ISSN 1221-9118)
2. Grigoraș Ioana, Pancreatita acută - forma severă; Jurnalul de chirurgie, 2005; Vol 1, Nr.1, ISSN 1584-9341.
3. Popescu I., Managementul pancreatitei acute severe. Chirurgia. 2006; 101(3): 225-228.
4. Yousaf M, McCallion K, Diamond T., Management of severe acute pancreatitis. Br J Surg 2003;90:407-420.