

IMPLICATION OF PATHOGENIC MICROBIAL GERMS ABOUT PROGNOSTIC OF SEVERE ACUTE PANCREATITIS

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Abstract

Acute pancreatitis is surgical medical emergency and to diagnosticate this affection is presently a serious problem, because the signs and symptoms of pancreatitis are similar with other medical affection and they have numerous complications. The diagnostic is based usually on a medical historic, a physical check, and also on the laboratory test results. This here present represents a study for identify and treat the microbial intestinal flora which is implied in acute necrosis pancreatitis. This is a late study effectuated on number of 635 patients hospitalized with the diagnostic of acute pancreatitis, from the Clinical Hospital Oradea. The treatment for the severe form of acute pancreatitis, represents an essential constituent in fading of mortality, but also a perspective in finding the best chemotherapy associate.

Key words: acute severe pancreatitis, microbial germs, prognostic

INTRODUCTION

Acute pancreatitis is characterized thru acute inflammation of pancreas, and thru enzymatic activation coming like an reply monomorph for numerous causes, and which is determining pancreatic enzyme sppling, activated in the pancreatic texture, in the near by zones and also in the systemic circulation sometimes getting to autolysis fermentation and necrose of pancreatic texture (www.ymed.ro/pancreatita-acuta-forma-severa).

In 1992 at the International Miting from Atlanta, the acute pancreatitis was describe as a acute inflammation usually fast localised with severe epigastric pain radiating to the back, oftenly associate with fever, vomia, diarrhea, hemodynamic instability or tachycardia.

Back way than was established the clinical classification of this illness, coming as:

- the benign form (80%) in which the disfunction of organs and systems is minimalised, and complet reversible. Histopatological, these forms are characterized with edem interstitial, but they can also be founded body fat necrosis. The evolution of benigne pancreatitis in a severe form is rare.
- the severe form (20%) associated with multiple organs insufficiency and represented with shock, represents the forms which can be associated with life tread complications therefore with sistematical complications and pancreatic and peripancreatic collections

Acute pancreatitis has an incidence of 30-50 cases/100.000 population/year, including all forms. 80% of cases have a self-limited evolution. Of all cases 15-20% are performing to hemoragical-necrotical pancreatitis, performing a mortality of 30-50%, with infected pancreatic necrosis and plurivisceral insufficiency (Georgescu et al.).

MATERIAL AND METHODS

In this here study was included a number of 635 patients , hospitalized in the Clinical Hospital Oradea, between 01.01.2000-31.12.2009, and from database and medical files was selected generally informations (age,sex, recidives, illnesses, a debute, weight), clinical data, laboratory data (taken to hospital, in illness evolution, pre- and after surgery), imagistical investigations (X- ray, sonography, CT), in between operatory data(pancreatic lesions, peripancreatics, gallbladder condition, extrahepatic bile ducts and all injurys associated), and also dates concerning drugs treatments and surgical, and also discussions about the results obtained(healing, improving, complications, death).

Tabel 1

Characteristics of the study group

CARACTERISTICĂ	PANCREATITĂ ACUTĂ		TOTAL
	edematoasă	necrotică	n/%
forma clinică	268	93	361/100
sex masculin	195	61	256/70,97
sex feminin	73	32	105/29,08
vîrstă < 55 ani	193	60	253/70,08
vîrstă > 55 ani	75	33	108/29,97
< 55 ani masculin	131	45	177/49,03
< 55 ani feminin	46	15	76/21,05
> 55 ani masculin	64	16	64/17,72
> 55 ani feminin	27	17	44/12,18
obezitate	30	16	46/7.0
boli asociate	60	33	93/14.6
etiologie biliară	76	29	105/29.0
etiologie etanolică	22	1	23/6.3
altele	170	63	233/64.5

RESULTS AND DISCUSSION

Prophylactic administration of antibiotics from the beginning in complex treatment for acute pancreatitis severe form, makes an efficient prevention of infectiei necrotice pancreatice, and improve the evolving course of this illness and fades the number of cases in wich is necessary late surgical intervention for infected necrosis.

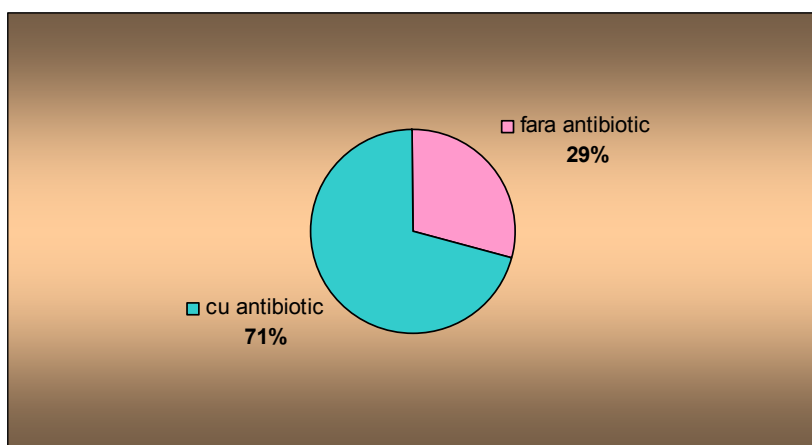


Fig.1 Medication distribution

Fig.1 shows the share of patients treated with antibiotics and chemotherapeutic associations. Due to some international studies effectuated by Ulm, 85% of deaths come in the third week from beginning. The patients with the severe acute pancreatitis are hospitalized usually in intensive care units for continue monitorizing of vital signs, of biological parameters, and pancreatic enzymes(Grigoras I, 2005).

Intestinal flora is important source for bacterias wich are producing the infection, and the most offen germs are *Escherichia Coli*, *Pseudomonas spp.*, *Klebsiella*, *Proteus*, *Streptococcus spp.*, *Enterobacteriaceae* and anaerobic bacteria (Lazar V., 2006).

Tabel 2

Bacteria isolated in pancreatic infection

Flora izolată	Nr. Pacienților	Procentul	Antibiotice folosite
<i>Staphylococcus spp.</i>	10	33,3%	Ampicilina, Tienam, Cefort, Metronidazol, Arnetin, Augmentin
<i>Polimicrobiană (Gram -)</i>	6	20%	Tienam, Invanz, Metronidazol, Ampicilina, Gentamicina, Cefort
<i>Enterococcus</i>	1	3,3%	Cefozon, Metronidazol
<i>E. Colli</i>	4	13,3%	Meropenem, Metronidazol, Cefozon, Arnetin
<i>Pseudomonas aeruginosa</i>	1	3,3%	Cefperazona
<i>Candida</i>	1	3,3%	Cefperazona, Fluconazol
<i>Negativă</i>	9	30%	-

The pancreatic necrosis infection is associated with a high rate of death 40%, and is needed profilactic antibiotics administration. From 32 patients with necrotic pancreatitis was taken secretions for germs determination for pancreatitis infections. The most biggest number was found in *Staphylococcus aureu* and *Staphylococcus white* (10 cases), and Gram germs infections (6 cases), *Escherichia Coli* (4 cases), *Enterococcus*, *Piocianic (Pseudomonas aeruginosa)* and *Pioceanic* associated with *Candida* (1 case). From these 9 patients have the results negatives.

The germs determinations was made based on tests taken intraoperative or from drain. The infections evolution for the patients with acute pancreatitis is continuing problem and highly tested and is due to prolonged hospitalizing in ATI wards, and due to many invasive procedures (venipuncture, surgery, intubation orotraheale), immunity fading, but especially due to broad-spectrum antibiotics. These here studies and test are making connection to pancreatic infection already existing, to mycotic infection associated wich is a factor of risk in severe acute pancreatitis evolution.

For defining of invasive candidiasis to surgical patients, Geldner proposed in year 2000 (Geldner G., Ruhnke M., Lepper P., 2000), followings:

1. clinical signs of postoperative infection
2. the lack of germs and insufficient answer to antibiotic treatment
3. tracking Candida in bacteriologic investigation
4. answer to antimycotic therapy
5. specific serum antibodies

Starting from theory that invasive candidiasis is growing high mortality Yue-Ming He and his partners published in 2003 a study promoting the prophylaxis of fungal infections (Yue-Ming He, Xin-Sheng Lv, Yhi-Su Liu, 2003). The results of the study showed reducing of infection rate and highly decrease to infected cases due to antifungal resistance.

CONCLUSION

Necrotic pancreatic tissue infection cause mortality by 40%, so it is preferable to be done early initiation of chemotherapy. Antibiotics and chemotherapeutic broad spectrum of severe acute pancreatitis infection is critical in reducing mortality, but also a research topic in finding the most effective combination of antibiotics. Treatment with antibiotics in acute pancreatitis has been debated, oscillating over time between pancreatic necrosis and infection prevention of nosocomial infections in critically ill and fear of selection of resistance and promoting systemic candidiasis. The choice of antibiotic should be taken into account several factors: diffusivity pancreatic tissue (variable diffusivity depending on developmental stage), the spectrum of possible bacterial flora involved, cost / efficiency as favorable and fewer side effects. Responding optimally to these goals, the first place of choice lies in antibiotic imipenem with a very good diffusivity in pancreatic tissue, broad spectrum antibacterial action, few side effects and cost/effectiveness ratio favorable. Prophylactic antibiotics alter microbial flora involved in pancreatitis, thus increase the incidence of Gram-positive (Banks P, M. Freeman).

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