

## THE SEVERITY DIAGNOSIS IN ACUTE PANCREATITIS, THE APACHE SCORE

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### **Abstract**

*The appreciation of the severity of pancreatitis is made standardized with the help of the scores of severity, of the biological marker and of imagistic explorations. For the evaluation of the acute pancreatitis there have been applied systems of quantifying the general severity APACHE II and SAPS-SIMPLIFIED ACUTE PHSIOLOGY SCORE.*

**Key words:** score APACHE, biologic markers, pancreatic necrosis

### **INTRODUCTION**

The new strategies of treatment in acute pancreatitis of severe form give good results with the condition of their early introduction: admission of the patient in intensive care, early starting of the antibioprofilaxis and enteral nutrition, early treatment with lexipafant (antagonist of the the factor of plachette activation). Thus the early identification of the degree of severity is the key factor in acute pancreatitis. The appreciation of the severity of pancreatitis is made standardized with the help of the scores of severity, of the biological marker and of imagistic explorations.

The first system of scoring applied in acute pancreatitis has been created by Ranson and has 11 clinical and analytical objective measurements in the first 48 hours from the disease. A modification of this system has been created by Imrie. The best clinical applicability of these systems is represented by the identification of those ill patients who need only those supportive therapeutical measurements.

For the evaluation of the acute pancreatitis there have been applied systems of quantifying the general severity APACHE II and SAPS-SIMPLIFIED ACUTE PHSIOLOGY SCORE. These systems are based on the evaluation of the vital clinical data as the arterial tension, pulse, temperature, biochemical data and the kidney and pulmonary functional parameters.

The first 24 hours from the admission these systems have a sensitivity in finding the severe forms of 70%, similarly with the Ranson and Imrie system of scores.

In the score for the prognosis it is used the peritoneal cleavage introduced in 1977 by Pickford.

The imagistic processes regard the computerized tomography with a substance of contrast. Without a substance of contrast the exploration can find the existence of a pancreatic inflammatory formation and of a collection of fluids near the pancreas but can't find the presence and the extension of pancreatic necrosis. The computerized tomography with simultaneous oral and intra venous administration of the contrast substance represents the standard method for defining the necrosis pancreatitis. This method is benefic also in finding the pancreatic abscesses. The bacterial contamination of pancreatic necrosis is controlled by guided puncture of the areas with necrosis.

From the point of view of the biologic markers the progresses from the evolution of prognosis of acute pancreatitis are based on the actual knowledge of the physical pathological events that appear during the evolution of the disease.

The APACHE I score (Acute Pshysiology and Chronic Healter Evolution) takes into account 34 parameters that reflect the degree of malformation of 7 major physiologic systems. Every result has a coefficient from 0 to 4 depending on the degree of malformation. As the sum of the points is greater the stage of the disease is more severe

The APACHE II and III scores represent a development of the APACHE I scores.

The Ranson and Glasgow scores of prognosis don't have a value but in the first 24-48 hours from the beginning.

#### ***THE PURPOSE OF THE PAPER.***

The purpose of the paper is the evaluation from the point of view of the diagnosis of severity of the acute pancreatitis.

#### **MATERIALS AND METHOD**

For this paper we made a study with a group of 50 patients from the total of 269 of patients from the Surgery section of Clinical County Hospital from Oradea in the period of 2005-2009.

#### **RESULTS AND DISCUSSIONS**

The early identification of the degree of severity is a key factor in approaching the acute pancreatitis.

For the evaluation of the acute pancreatitis there have been applied systems of quantifying the general severity APACHE II and SAPS-SIMPLIFIED ACUTE PHSIOLOGY SCORE. These systems are based on the evaluation of the vital clinical data as the arterial tension, pulse,

temperature, biochemical data and the kidney and pulmonary functional parameters.

The bioclinical scores: Ranson > 3 at the admission and 48 hours after and/or the APACHE II score > 8. The value of these scores is different. With a sensibility of 73% and a specificity of 87% the Ranson score covers only the first 48 hours insufficient in the case of the patients that came late and for their observance in the dynamics. The APACHE II score more complex with a sensibility of 77% and a specificity of 84% permits the observance of the evolution of the patients in the dynamics for a longer period of time; it is hard though for the surgeon but as in the last years the severe acute pancreatitis are more treated with ATI, its utility increases, the anesthetists being more familiar with it.

The bioclinical scores

Table 1

No.of cases	Ranson score at admission > 3	Ranson score in 48 hours > 3	APACHE II > 8
50	11	20	19
%	22	40	38

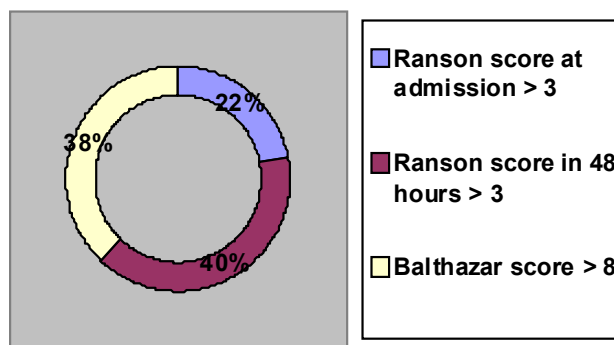


Fig.1. Distribution of the no. of cases considering the bioclinical scores.

## CONCLUSIONS

1. The appreciation of the severity of pancreatitis is made standardized with the help of the scores of severity, of the biological marker and of imagistic explorations.
2. The criteria for establishing the diagnosis of acute pancreatitis are:
  - Ranson and APACHE II bioclinical scores

- The presentation of insufficiencies of organs and systems
  - Computerized tomography and Balthazar score
  - The presence of local evolutional complications.
3. APACHE II score permits the observance of the patients in dynamics for a longer period of time.

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