

EPIDEMIOLOGIC DATA IN ACUTE PANCREATITIS

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Abstract

From the pathology of the pancreas, without a doubt most of the researches were addressed to the acute pancreatitis, without reaching until the present to conclusions unanimous accepted regarding the different etiology, pathogenic, physiopathology, morphopatologic, clinical, paraclinical and therapeutical aspects. What was specified in the 21 century is that the acute pancreatitis is not a single disease but it could be defined as a complex syndrome, polymorph, rhapsodic, hardly.

Keywords: acute pancreatitis, paraclinical, morphopatologic.

INTRODUCTION

The pancreas is considered the most complex organ of the body, with the exception of the liver and the brain. Situated deeply, “in the dark”, hard to be accessed, for many years it was considered a kind of tabu even for the bravest surgeons.

Refusing to unveil its numerous secrets, this organ aroused the interest of anatomists, physiologists, biochemists and other scientists and clinicians along the centuries.

For the first time the term “pancreas” is found in the paper of Aristotel – *Historia Animalium*, written in 336 before Christ. Herophilus from Calcedonia (360-320 before Christ) describes

Many organs of which also the pancreas. Ruphos from Ephes talks about the pancreas, defining it: “the pancreas is a fleshy, fat and glandular organ, attached to the first part of the intestine”. Galen in his paper “*De Usu Partium*” affirms “from this reason, I believe that the omentum is attached to the spleen and to the part named pancreas.” Also Galen in his paper “*De venarium arteriarumque diffectio*ne” used another denomination for this organ” pancreas, which the others name KALIKREAS (beautiful body)”.

From the pathology of the pancreas, without a doubt most of the researches were addressed to the acute pancreatitis, without reaching until the present to conclusions unanimous accepted regarding the different etiology, pathogenic, physiopathology, morphopatologic, clinical, paraclinical and therapeutical aspects. What was specified in the 21 century is that the acute pancreatitis is not a single disease but it could be defined as a complex syndrome, polymorph, rhapsodic, hardly.

OBJECTIVES

1. Identification of the cases of acute of pancreatitis that appeared for the patients hospitalized at the Clinical County Hospital from Oradea;
2. Determining the incidence of acute pancreatitis, reported to the total number of admissions, the degree of severity, the surgical interventions, the origin, the age, the sex, the occupation.

MATERIAL AND METHODS

We performed a retrospective, prospective study, for a number of 269 patients, with the diagnosis of acute pancreatitis, respectively 149 patients with the diagnosis of easy acute pancreatitis and 120 patients with severe pancreatitis hospitalized in the surgical department of the Clinical County Hospital from Oradea.

The period for which it was extended the research is of 5 years, in the period of 01.01.2005-31.12.2009.

For the study it was used the archive of the Clinical County Hospital from Oradea, respectively the computerized database of the unit.

It were used the anamnestic data and of the identification of the patients from the observations papers.

The research method that was used is the statistic study that included: the determination of the OR quota report (having an interval of confidence of 95%), the hi square test, respectively the Fisher test (for the determination of the significance degree).

The processing of the data was performed with the help of the program Microsoft Office Excel 2003.

The representation of the results was performed with the help of graphics and tables.

RESULTS

In the period of 01.01.2005-31.12.2009 were hospitalized 117680 patients with acute pancreatitis, admitted in the surgical departments of the Clinical County Hospital from Oradea.

The Evolution of the number of cases of AP (Acute pancreatitis) from the total of hospitalizations.

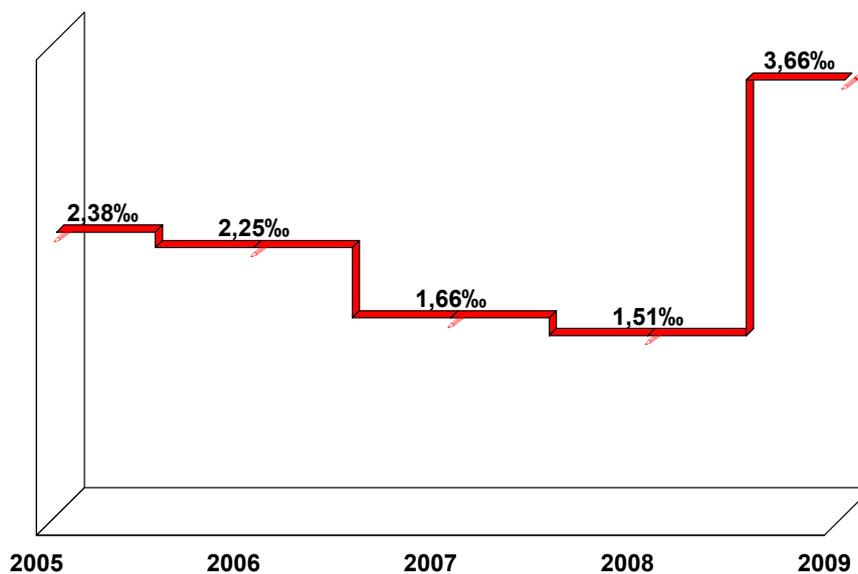
Table 1

The Evolution of the AP weight in the total of hospitalizations.

Year	No. of hospitalizations	PAU		PAS		Total	
		Nr.	‰	Nr.	‰	Nr.	‰
2005	20566	23	1,12	26	1,26	49	2,38
2006	22617	16	0,71	35	1,55	51	2,25
2007	24756	31	1,25	10	0,40	41	1,66
2008	25126	26	1,03	12	0,48	38	1,51
2009	24615	53	2,15	37	1,50	90	3,66
TOTAL	117680	149	1,27	120	1,02	269	2,29

PAU – Easy Acute Pancreatitis
 PAS – Severe Acute Pancreatitis

In the period 2005-2008 it can be seen a decrease trend of the AP weight in the total of hospitalizations (from 2,38‰ to 1,51‰), and in 2009 the weight was almost doubled related to the weight of the previous period (3,66‰ related to 1,92‰ in the period 2005-2008).



Graphic no. 1. The Evolution of the number of cases on AP (Acute pancreatitis) from the total of hospitalizations.

The Evolution of the number of cases of AP (Acute pancreatitis) depending on the degree of severity:

Table 2

The weight of the types of AP from the total of AP /years.

Year	PAU		PAS		Total
	No.	%	No.	%	No.
2005	23	46,9	26	53,1	49
2006	16	31,4	35	68,6	51
2007	31	75,6	10	24,4	41
2008	26	68,4	12	31,6	38
2009	53	58,9	37	41,1	90
Total	149	55,4	120	44,6	269

From the analysis of the evolution of the report between PAU and PAS, in 2005 is registered a report almost equal between the two types (46,9% versus 53,1%, report 1:1,1). In 2006 the report PAU/PAS was of 1:2,2 (31,4%, versus 68,6%, in 2007 and 2008, the reports PAU/PAS were of de 3,1:1, respectively 2,1:1 (75,6%, versus 24,4%, respectively 68,4%, versus 31,6%), and in 2009 this report was of 1,4:1 (68,9%, versus 41,1%).

The Evolution of the prevalence of the AP operated from the total of surgical interventions:

Table 3

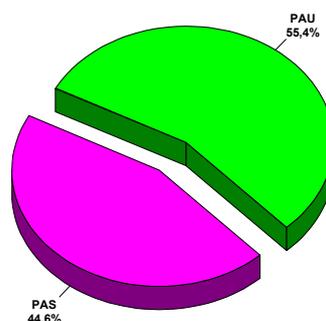
The Evolution of the operated AP weight in the total of hospitalizations.

Year	No. of surgical admissions	No. of operated AP	%
2005	9458	22	2,33
2006	15342	32	2,09
2007	13130	27	2,06
2008	14397	28	1,94
2009	18787	42	2,24
TOTAL	71414	151	2,11

In the period 2005-2008 the weight of the case of operated AP from the total of surgical interventions decreased from 2,33‰ to 1,94‰, increasing in 2009 to 2,24‰.

From the total cases with AP, 56,1% were operated, the smallest percentages were in years 2005 (44,9%) and 2009 (46,7%), being registered a peak in 2008 (73,7%).

The degree of severity:



Graphic no. 2. The Distribution of the cases depending on the severity degree of AP.

DISCUSSIONS.

Between the years 2005-2009 were hospitalized 117680 patients with acute pancreatitis at the Clinical County Hospital from Oradea, on the surgical departments.

It is remarked a decreasing trend of the AP weight from the total of hospitalized cases (from 2,38‰ to 1,51‰), in the period 2005-2008 and in 2009 the weight was almost doubled related to the weight of the previous period (3,66‰ related to 1,92‰ in the period 2005-2008).

The report between PAU and PAS, in 2005 is almost equal between the two types (46,9% versus 53,1%, report 1:1,1), in 2006 the report PAU/PAS was of 1:2,2 (31,4%, versus 68,6%, in 2007 and 2008, the reports PAU/PAS were of 3,1:, respectively 2,1:1 (75,6%, versus 24,4%, respectively 68,4%, versus 31,6%), and in 2009 this report was of 1,4:1

On the level of the Bihor county the incidence of acute pancreatitis is much larger (39 cases / 100.000 people/year). Regarding the incidence specific for sexes from our study it can be seen that the men are the most affected by the acute pancreatitis, with a sex ratio men:women = 1,4:1.

From the study we made at the Clinical County Hospital from Oradea, we have seen a decreasing trend of the AP weight from the total cases hospitalized (from 2,38‰ to 1,51‰), in the period 2005-2008 and in 2009 the weight was almost doubled related to the weight of the previous period (3,66‰ related to 1,92‰ in the period 2005-2008).

Comparing the personal results with the international results it can be concluded that PAU is the form that predominates at the patients.

From the point of view of the origin, we observed that the majority of the patients which developed acute pancreatitis come from the urban background (53,2%).

From the point of view of the occupation the majority of the patients with AP (25,3%) were agriculturists, followed by almost 20% of the clerks (19,7%) and pensioners (19,3%).

In the period 2005-2008 the weight of the case of operated AP from the total of surgical interventions decreased from 2,33‰ to 1,94‰, increasing in 2009 to 2,24‰, which can be argued by the increase in parallel of the number of cases reported in the respective year.

From the total cases with AP, 56,1% were operated, the smallest percentages were in the years 2005 (44,9%) and 2009 (46,7%), being registered a peak in 2008 (73,7%).

From the personal statistical analysis it results that most of the cases of AP were registered at the age group of 41-50, for PAU, and for PAS (23,5%, respectively 32,5%), the average age being insignificantly larger for patients PAU than those with PAS ($47,1 \pm 7,5$ years for PAU, respectively $46,4 \pm 6,8$ years for PAS) ($p=0,174$).

Depending on the severity of AP, comparing the distribution on months of the cases, we remarked that there are significant differences between PAU and PAS ($p < 0,001$), for PAU is registered over 10% of the cases in the months February (14,1%), May (11,4%) and October (15,4%), and for PAS in the months January (14,2%), June (10,8%), October (12,5%) and November (15,0%).

Comparing the cases of acute pancreatitis/season, over 55% of the cases are registered in the autumn and in the winter, the autumn being the season with most of the cases, a possible explanation being the increase of alcohol consumption in this period.

CONCLUSIONS.

The most increased incidence of AP was registered in 2009 when it was doubled, related to the weight of the previous period (3,66% compared to 1,92% in the period 2005-2008).

The correlation between the incidence of the sickening and the environment of origin urban/rural is insignificant.

Most of the case of PAU/PAS were registered in 2008, the reports PAU/PAS being of 3,1:1 respectively 2,1:1 (75,6% versus 24,4%).

AP is a pathology that affects mostly the men, the report between the two sexes being of 1,4♂:1♀.

Most of the case of AP were registered at the age group of 41-50, for PAU, and for PAS (23,5%, respectively 32,5%).

Depending on the distribution on months of the cases with PAU and PAS, we remarked that there are significant differences between PAU and PAS ($p < 0,001$), for PAU are registered over 10% of the cases in the months February (14,1%), May (11,4%) and October (15,4%), and for PAS in the months January (14,2%), June (10,8%), October (12,5%) and November (15,0%).

REFERENCES

1. Acalovschi I., 1998, Terenul cu afectare pancreatică, în *Tratat de patologie chirurgicală*, vol. II, coord. G. Litarczek, Ed. Med. Bucuresti, pp. 234-246.
2. Atkinson S., Seiffert E., Bihari D., 1998, A prospective, randomized, double-blind, controlled clinical trial of enteral immunonutrition in the critically ill, *Crit. Care Med.*, vol.26, no.7, pp. 1164-1171.
3. Appellos S., Borgstrom A., 1999, Incidence, aetiology and mortality rate of acute pancreatitis over 10 years in a defined urban population in Sweden, *Br. J. Surg.*, pp. 8, 465-470.
4. Anderson R., Eckerwall G., Haraldsen P., 2000, Novel Strategies for the Management of Severe Acute Pancreatitis, *Yearbook of Intensive Care and Emergency Medicine 2000*, edited by J.L. Vincent, Springer Verlag, pp. 379-389.
5. Boucher B.A., 2000, Procalcitonin: clinical tool or laboratory curiosity?, *Crit. Care Med.*, vol.28, no.4, 1224-1225.
6. Bryce Taylor, 1998, Acute pancreatitis in the critically ill, *Principles of Critical Care*, edited by J. Hall, G. Schmidt, L. Wood pp. 1269-1277.
7. Meier R., Sobotka L. 2000, Nutritional support in acute and chronic pancreatitis, in *Basics in Clinical Nutrition*, edited for ESPEN Courses, pp. 189-197.
8. Malledant Y., Tanguy M., Seguin P., 2000, Pancréatites aiguës graves, *Actualités en réanimation et urgences* pp. 155-168.
9. Rattner D.W., Warshaw A.L. 1992, Acute Pancreatitis, in *Care of the Critically Ill Patient*, edited by J. Tinker, M. Zapol, Springer Verlag, pp. 633-648.
10. Steer M.L., 1995, Acute Pancreatitis, in *Textbook of Critical Care*, edited by Shoemaker, Ayres, Grenvik, Holbrook, W.B. Saunders Comp., pp. 984-990.
11. Venneman I., Deby-Dupont G., Lamy M., 1993, Pancreatic Cellular Injury after Cardiopulmonary Bypass, in *Yearbook of Intensive Care and Emergency Medicine* edited by J.L. Vincent, Springer Verlag, pp. 297-309.
12. Vincent J.L., 2000, Procalcitonin: THE marker of sepsis?, *Crit. Care Med.*, vol.28, no.4, pp. 1226-1227.
13. Widdison A.L., Karanja N.D., 1993, Pancreatic infection complicated acute pancreatitis, *Br.J.Surg.*, pp. 148-154.
14. Wang X.D., Wang Q., Andersson R., Ihse I. 1996, Alterations in intestinal function in acute pancreatitis in the rat, *Br.J.Surg.*, 83, pp. 1537-1542.