# INFLUENCE OF CHRONIC ALCOHOL CONSUMPTION IN OCCURRENCE AND COURS OF PANCREATIC PSEUDOCYST

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***Abstract***

*Pancreatic pseudocysts tend to be more common in chronic pancreatitis compared with acute pancreatitis, and more frequently in alcohol-induced chronic pancreatitis. There are some particularities in disease progression in chronic alcohol consumption which can increase morbidity/mortality rate. Present study aims to analyze the impact of alcohol consumption in the occurrence and evolution of pancreatic pseudocyst. We took into account demographics, etiological, clinical, biological, imaging and therapeutic aspects, compliance to treatment and alcohol consumption. The spectrum of clinical manifestations of pancreatic pseudocyst in relation to alcoholic chronic pancreatitis is more attenuated than after acute pancreatitis, which sometimes resulted in late presentation or when complications occur. Evolution of the disease was longer due to low compliance to treatment and continued of alcohol consumption, postoperative complications, poor nutritional status with significant biological changes.*

**Key words:** pancreatic pseudocyst, alcohol consumption

## INTRODUCTION

Pancreatic pseudocyst (PCP) is a complication of acute or chronic pancreatitis, which can also occur as a complication of trauma that interested pancreas. Acording to Ake Andrén-Sandberg and Christos Dervenis, alcohol-related pancreatitis appears to be the major cause of PCP in studies in countries where alcohol consumption is high and reaches a rate of 59% -78% of all pseudocysts. Other causes found were recurrent attacks of acute pancreatitis (5%), cholelithiasis (4%) or unknown causes (20%). Data on spontaneous resolution of PCP varies from study to study, cases being reported in small PCP (<4cm), but the larger PCP, acute PCP or associated with pancreatic calcifications or abnormality of the pancreatic duct showed no spontaneous resolution. At increased rates of mortality and morbidity concur the PCP complications that may have an incidence between 9% and 43% according to some authors, and course of the disease could be adversely affected by continued alcohol consumption

## MATERIAL AND METHOD

The study is based on retrospective and prospective analysis of 117 patients diagnosed with pancreatic pseudocyst, and admitted to the Surgical Clinic of Oradea County Hospital and Oradea Pelican Hospital in the period

2002-2010. We took into account demographic aspects, etiological, clinical and biological aspects, imaging, therapeutic methods, disease progression, alcohol consumption, and compliance to treatment. Of all patients, 23 (17.55%) were female and 94 (82.45%) male. The average age in the the group of patients studied was 53.03 years (35 to 71 years). 67 (57.27%) patients were from urban areas and the remaining 50 (43.73%) from rural areas; 89 patients (76.06%) were active individuals.

We approached the expectative therapeutic attitude for patients presenting PCP under 5cm size, with evolution less than 6 weeks, without complications, clinically and biologically stable, also for patients with increased operator risk but without complications of PCP. All patients received medication (pain relief, decrease of pancreatic secretion, antibiotics if needed) dietary measures and with prohibit the consumption of alcohol, and also treatment for associated diseases. For monitoring the course of PCP, were followed: clinical manifestations, biological and PCP fluid changes, imaging changes, compliance to medical treatment and dietary measures, alcohol consumption.

Data obtained were statistically analyzed and quantified in terms of achieving the proposed objectives, respectively the influence of chronic alcohol consumption in occurence and cours of pancreatic pseudocyst.

**RESULTS AND DISCUSSIONS**

In terms of etiology, alcoholic pancreatitis was identified as the cause of PCP in 89 (76.06%) cases, biliary pancreatitis in 25 (21.36%) cases, abdominal trauma 3 (2.56%) cases (Fig.1). The preponderance of cases with acute pancreatitis was observed in patients aged 35-44 years and those with chronic pancreatitis between 45-64 years.

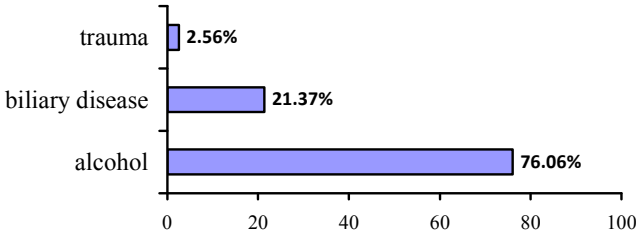


Fig.1. Etiology of PCP.

In terms of symptomatology in patients enrolled in the study group, 21 (17.95%) patients were asymptomatic until the time of diagnosis when PCP was detected incidentally during an imaging examination, and 46 (39.31%) cases of PCP was oligosymptomatic, patients accusing dyspepsia,

vague abdominal pain, early satiety. In acute PCP dominant symptom was pain; patients with alcoholic chronic pancreatitis had weight loss, anorexia and fatigue, flatulence, abnormal intestinal transit. General condition was, influenced in 5 (4.27%) patients and alterated in 19 (16.24%) cases. Patients with poor nutritional status, 32 (27.36%), were mainly among those with alcoholic chronic pancreatitis or low socio-economic conditions (Fig.2).

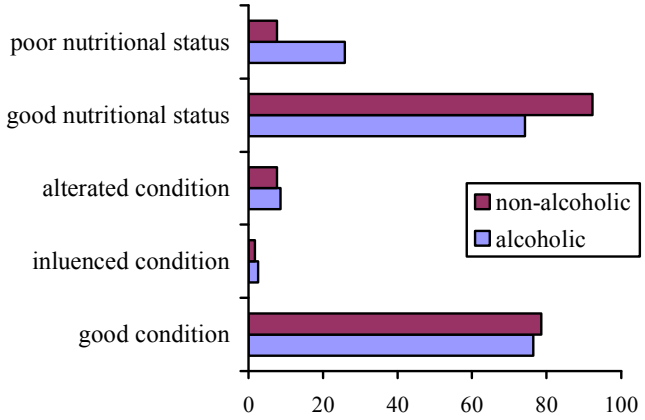


Fig.2. General condition and nutritional status in study group

98 (83.76%) of PCP were single, and 19 (16.24%) were multiple majority of patients in this group being with alcoholic pancreatitis.

Postoperative evolution was favorable in the 53 (61.62%) cases from a total of 86 (73,5%) patients operated, and the overall morbidity rate was 24.78% (29 patients). There were 4 deaths (3.41%) that occurred in debilitated patients presenting complicated infected PCP with the appearance of toxic-septic shock and multiple organ failure.

Postoperative complications occurred in 29 (24.78%) patients and were represented by wound suppuration (2.56%), pancreatic fistula (4.27%), abscess (1.7%), wound dehiscence (1,7%), evisceration (1.7%), anastomotic dehiscence (0.85%), intestinal subocclusion (1.7%), acute pancreatitis (2.56%) (fig.3). Pancreatic fistula was more common in patient with alcoholic chronic pancreatitis.

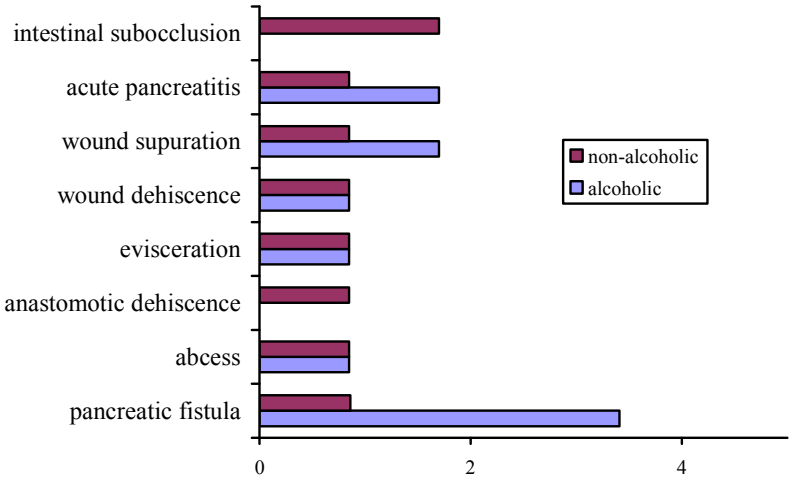


Fig.3. Complications occurred postoperatively

General condition have improved significantly in 104 (88.88%) cases, with the disappearance of pain in 92 (78.63%) patients. Persistence or recurrence of pain was due to PCP recurrence in 9 (7.69%) cases, and failure to comply nutritional restrictions and alcohol consumption, with the progressive development of chronic pancreatitis and pancreatic rebound in 12 (10.25%) cases, these patients requiring reassessment and hospitalization for medical and surgical treatment.

Of the 89 patients with PCP due to alcoholic etiology of pancreatitis, 7 patients (7.86%) experienced PCP recurrence, and of the 25 patients with biliary etiology of pancreatitis, 2 patients (8%) had recurrence of PCP (Fig.4).

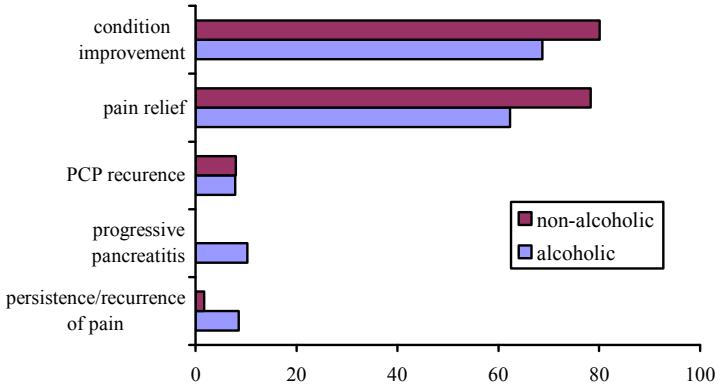


Fig.4. Symptomatic evolution and recurrence of PCP.

Depending on the etiology of pancreatitis was observed an increase in morbidity and mortality in patients with alcoholic pancreatitis (28.08%) than those with biliary pancreatitis (16%) due to poor nutrition and lack of adherence to treatment (fig.5). In patients with poor nutritional status data analysis showed a significant increase in morbidity (53.12%) than patients with satisfactory nutritional status (14.11%). However in the terms of age, there was an increase in the morbidity rate in patients over 50 years (24.78%), especially among debilitated patients with chronic alcoholism and poor nutritional status.

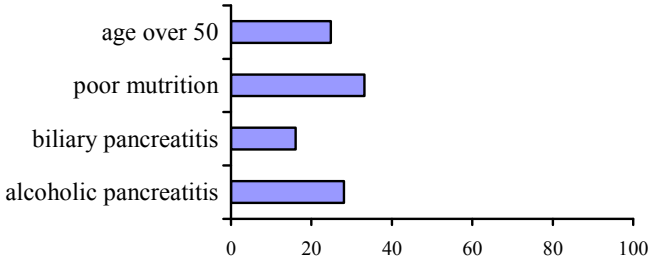


Fig.5. Morbidity rate.

**CONCLUSIONS**

The main risk factors in the occurrence of PCP are alcoholism and cholelithiasis, the literature describing the formation of PCP to be less common after acute pancreatitis compared with chronic pancreatitis, the last form being alcohol-induced more frequently than non-alcoholic. Increased incidence in active patients emphasizes the correlation between pancreatic pathology and lifestyle governed by physical and psychological stress in the socio-economic conditions that persist for more than 20 years.

The spectrum of PCP clinical manifestations in relation to alcoholic chronic pancreatitis is more attenuated than the PCP after acute pancreatitis, which sometimes resulted in late presentation or when complications occur.

Most times, in case of PCP in relation to alcoholic chronic pancreatitis, nutritional status is poor with significant changes in biological constants, morbidity and mortality rate is much higher than other etiologies of the PCP. Also evolution of the disease is longer due to low compliance to treatment and continued of alcohol consumption, the most common postoperative complication being pancreatic fistula causing prolongation of the disease and the need for repeated hospitalizations and complex medical and surgical treatment. Persistence or recurrence of pain was due to recurrence or unfavorable evolution of PCP when pacient failure to comply nutritional restrictions and alcohol consumption.

**REFERENCES**


1. Aghdassi A, Mayerle J, Kraft M, Sielenkämper AW, Heidecke CD, Lerch MM, 2008, *Diagnostic and treatment of pancreatic pseudocyst in chronic pancretitis*, Pancreas 36 (2): 105–12
2. Andrén-Sandberg Å, Dervenis C., 2004, *Pancreatic Pseudocysts in the 21st Century. Part I: Classification, Pathophysiology, Anatomic Considerations and Treatment*, JOP. J Pancreas (Online) 5:8-24.
3. Andrén-Sandberg Å, Dervenis C., 2004, *Pancreatic Pseudocysts in the 21st Century. Part II:Natural History,* JOP. J Pancreas (Online) 5(2):64-70
4. Andronescu P., Simion S., Andronescu C., Croitoru A., Angelescu M., Mastalier B., Zarafin A., 2002,*Optiuni terapeutice in pseudochistul de pancreas,* Chirurgia, 95:297.
5. S.T. Barbu, Ake Andren-Sandberg, 2008, *Pancreatic diseases in 2008*, What are the burning issues?, Casa Cartii de Stiinta, p 122-125, 155-177
6. Chifan M. Strat V., Diaconescu M.R., Niculescu D., 1986, *Pseudochisturile postnecrotice ale pancreasului*, Chirurgia (Buc.), 35:37-42
7. Cucu A., Cornila R., Cristian A., Durach L., Sculeanu R., 2003, *Pseudochistul pancreatic,* Chirurgia, 4, 98:337-340
8. Diaconescu MR, Vexler R, Costea I, Simon I, Iacomi S., 1996, *Colectii lichidiene pancreatice si extrapancreatice succedand pancreatitei acute*, Chirurgia, 45:239
9. Ionescu M., Ciurea S., Bailia S., Georgescu S., Fotiade B., Popovici A., Popescu I, 1999, *Evaluarea diagnostic si terapeutica a falsului chidt de pancreas cu hemoragie intrachistica acuta*, Chirurgia, 94:45.
10. Juvara I., Dragomirescu C., Pacescu E., 1985, *Modalitati evolutive particulare ale pancreatitei acute: revarsatele lichidiene peritoneale si pleurale cornice, pseudochiste migrate,* Chirurgia, 34:161
11. Proca E., 1986, *Tratat de Patologie Chirurgicala, vol VI - Patologia chirugicala a abdomenulu*i, Ed. Medicala, p 987-1039
12. Popa F., Gilorteanu H., Balalau C., 2002, *Pseudochist acut de pancreas*, *Consideratii anatomoclinice si terapeutice asupra unui lot de 12 cazuri*, Chirurgia 97:181.
13. Popa F., Bălălău C., Cuibac A., Popescu T., Guriță, R2005, *Pseudochist acut gigant compresiv de pancreas*, Revista Chirurgia (Supliment), pag .242
14. Stancescu M, Ciurea S., 1989, *Pseudochisturile pancreatice*, Chirurgia, 38-147, 137-146
15. Vitas GJ, Sarr MG., 1992, *Selected management of pancreatic pseudocysts: operative versus expectant management*, Surgery, 111:123-30
16. Vasile I., Mogos D., Paun I., Florescu M., 1999, *Pancreatita cronică - Probleme de diagnostic si indicatii chirurgicale,* Revsta Chirurgia 94, 1, p:37-45.