

## ASSESSMENT OF THE ESTIMATED RELATIVE RISK OF SOME RISK FACTORS IN CHRONIC PANCREATITIS

### Rodica Bugai

Discipline of internal medicine-semiology, Department of Internal Medicine, SUMF "Nicolae Testemițanu", Chișinău, Republic of Moldova

### Introduction

Chronic pancreatitis (CP) is a multifactorial pathology, involving exogenous and endogenous, genetic and non-genetic factors. The rather high incidence and prevalence of CP in the heterogeneous population of the RM imposes the need to study the estimated relative risk of some common risk factors.

### Keywords

chronic pancreatitis, risk factors, estimated relative risk (OR)

### Purpose

Assessment of the estimated relative risk (OR) in the 95% confidence interval (CI) of some conventional risk factors for CP.

### Material and methods

The study included 100 patients with CP, mean age-47,02±0,93, m/f-55/45 and 100 healthy people. Estimated relative risk (OR) in the 95% confidence interval (CI) of some risk factors for CP [mutations R122C/PRSS1, R117H/CFTR, N34S/SPINK1, alcohol, smoking, hypercholesterolemia, hypertriglyceridemia, Body mass index (BMI), family history (FH) of CP] was determined by using the parametric modeling system. Gene mutations were evaluated in the Molecular Genetics Laboratory of the Institute of Genetics, Physiology and Plant Protection of the Academy of Sciences of Moldova; as a biological specimen, venous blood was used. The genetic polymorphism was identified through the polymerase chain reaction and analysis of enlarged fragment length and restriction fragment length polymorphism, with the use of the respective primers.

### Results

A relatively high estimated risk (OR) has been demonstrated in people who consumed alcohol-23,22, 95% CI (8,18-71,04),  $\chi^2=57,17$ ,  $p<0,001$ . Smoking has an OR of 9,41, 95% CI (3,91-23,45),  $\chi^2=33,27$ ,  $p<0,001$ ; dyslipidemias: hypercholesterolemia-OR=2,41, 95% CI (1,18-4,96),  $\chi^2=6,00$ ,  $p<0,05$ , hypertriglyceridemia-OR=66,00, 95% CI (9,36 -1339,01),  $\chi^2=44,30$ ,  $p <0,001$ ; FH of CP-OR=3,84, 95% CI (1,99-7,46); R117H/CFTR in heterozygotes-OR=2,59, 95% CI (1,30-5,25),  $\chi^2=7,53$ ,  $p<0,01$ , homozygotes-OR=5,24, 95% CI (2,04-13,73),  $\chi^2=13,61$ ,  $p<0,001$ ; R122C/PRSS1 in homozygotes-OR=15,03, 95% CI (3,08-99,29),  $\chi^2=16,02$ ,  $p<0,001$ ; N34S/SPINK1 in homozygotes-OR=5,47, 95% CI (1,93-15,94),  $\chi^2=11,74$ ,  $p=0,001$  (Tab. 1). It is observed that the relative risk for CP is higher in the presence of the homozygous variant R122C/PRSS1-OR=15.03, exceeding 2,87 times the relative risk assigned by the R122H/CFTR mutation and 2,75 times by N34S/SPINK1 mutation, the homozygous variant.

**Table 1. Estimated relative risk (OR) in the 95% confidence interval (CI) of conventional risk factors for CP in the study subjects**

The evaluated index		OR value	95% CI min.	95% CI max.	$\chi^2$	p
Alcohol		23,222	8,182	71,042	57,16	<0,001
Smoking		9,409	3,906	23,450	33,27	<0,001
Hypercholesterolemia		2,405	1,175	4,956	6,00	<0,05
Hypertriglyceridemia		66,000	9,356	1339,070	44,30	<0,001
BMI>25		6,692	3,155	14,403	30,03	<0,001
CFTR (R117H)	heterozygotes	2,594	1,289	5,248	7,53	<0,01
	homozygotes	5,244	2,041	13,729	13,61	<0,001
PRSS1 (R122C)	heterozygotes	0,796	0,411	1,542	0,33	>0,05
	homozygotes	15,031	3,082	99,287	16,02	<0,001
SPINK1 (N34S)	heterozygotes	0,734	0,348	1,547	0,50	>0,05
	homozygotes	5,466	1,929	15,937	11,74	=0,001
FH of pancreatitis		3,841	1,990	7,456	18,04	<0,001

### Conclusions

There is a high estimated relative risk (OR) in the 95% confidence interval (CI) for CP risk factors: alcohol, hypertriglyceridemia, smoking, FH of CP, genetic markers, especially in the homozygous variant, more obviously in the case of mutation R122C/PRSS1.