

atively lower than that for advanced cancer. (2) Dominant sites for polyp in descending order were sigmoid colon, rectum, transverse colon, descending colon, ascending colon and cecum in male and female, respectively. Dominant sites for advanced cancer in descending order were rectum, sigmoid colon and ascending colon in male and female, but differed in rates between male and female. (3) In 774 polyp cases, early cancer was 2.1%. (4) In 58 advanced cancer cases, well-differentiated cases was dominant (58.6%) for histopathological grade.

1851 Value of Magnetic Resonance Imaging (MRI) in the Assessment of Idiopathic Fecal Incontinence

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There is currently no satisfactory method of assessing the morphology of the levator ani in patients with Fecal Incontinence (FI). The purpose of this study was to attempt to use MRI to identify a subgroup of patients with FI who can benefit from biofeedback training. *Methods:* Thirteen patients with neurogenic FI were enrolled. Eight of these patients (1 M, age: 83 years, 7 F, mean age: 47 ± 3 years) were compared with 8 controls matched with regard to age and sex (1 M, age: 83 years, 7 F, mean age: 47 ± 3 years). The thickness of the puborectalis muscle (PR) and the sphincter mechanism was measured in the axial and frontal planes at various levels by 2 different observers. The examinations were performed with a 1 Tesla device (Magne-ton SP 42 Siemens) equipped with a supraconducting magnet and a single transmitter/receiver antenna. *Results:* (1) The correlation between the measurements of the two observers was excellent. (2) PR measurements in the frontal plane were not correlated with those in the axial plane. This finding suggests that MRI provides new data about the muscular bundle. (3) On frontal sections, the PR appeared irregular with a succession of thick and thin areas. (4) In the frontal plane, the PR and sphincters were thicker in patients with incontinence than in controls. (5) It was not possible to divide the 13 patients with FI into several groups on the basis of MRI findings. *Conclusion:* (1) On frontal planes, MRI documented that the PR had a characteristic appearance in patients with idiopathic FI. (2) With current equipment MRI is of little practical value in the assessment of idiopathic FI.

1852 Recombinant Interferon Alpha (IFN) in Patients with Chronic Hepatitis C and Human Immunodeficiency Virus (HIV) Infection

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Hepatitis C virus (HCV) infection is common in intravenous drug addicts (IVDA) and can be associated with human immunodeficiency virus (HIV) infection.

Aim - To assess the response to and tolerance of IFN administration in patients with chronic hepatitis C and HIV infection.

Methods - We studied 8 IVDA (6 men) with chronic hepatitis C and HIV infection, mean age 22 yr (range 19–27). Mean ALT levels, mean prothrombin time, mean serum albumin and mean serum bilirubin, before treatment, were respectively 132 ± 114 UI (normal < 40), 84.6% \pm 11.1% of normal (range 58%–100%), 44.1 \pm 6.9 g/l (range 31–54) and 17.6 \pm 2.2 umol/l (range 5–85). All patients had anti-HIV antibodies detectable by Elisa and confirmed by Western blot assay. All patients had anti-HCV antibodies detectable by Elisa-test and confirmed by Riba. Histologic examination of the liver showed chronic hepatitis C in all patients. All patients have been treated with 3 MU thrice weekly for 6 months.

Results - 3 patients had a complete response, 2 a near complete response and 3 had no response. The response to IFN was not correlated with the initial ALT levels. In all patients with complete or near complete response, the response occurred in the first 2 months of therapy. Liver histology at the end of treatment showed an improvement in one patient who had a complete response.

Conclusions - In patients with chronic hepatitis C with HIV infection, the response and tolerance of recombinant IFN were not different from those usually observed in patients with chronic hepatitis C without HIV infection.

1853 Aids-Related Cholangiopathy

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Objective: To evaluate HIV positive patients with clinical cholangitis and/or structural abnormalities of the biliary tract (BT) detected by means of ultrasound study (US).

Methods: Ten patients were considered eligible for the study. The diagnosis of AIDS related cholangiopathy (ARCHO) was based on clinical manifestations with either liver function tests (LFT's) abnormalities or US morphological anomalies of the BT, or both. ERCP provided cholangiographic appearance of the BT and samples of bilis and papillar tissue for bacterial, virus parasites and pathological studies in 9 of 10 patients. Endoscopic sphinterectomy was indicated in 5 pts. Two required further cholecystectomy.

Results: There were 5 women and 5 men. The mean age was 34.3 (range 27–50). Six pts were drug addicts, 3 homosexuals and the risk factor was undetermined in one. All patients had advanced HIV disease, class IV CDC criteria. Mean CD₄ positive cell count at diagnosis was 80/mm³. Right upper quadrant pain was the presenting symptom in 6 of 10 patients. All of them had LFT's alterations suggesting cholestasis. Nine out of 10 patients with concomitant diarrhea had *cryptosporidium* (CRYPTO) in their stools. The US studies showed thickened and/or dilation of the common bile duct (CBD) in all the cases. Two presented also with irregularities and dilation of intrahepatic bile ducts (IBD). The ERCP showed irregularities with stenosis of the distal portion and proximal dilation of CBD in 7 of 9 and the IBD in 2 of 9. The gallbladder (GB) was distended and the wall thickened with intraluminal defects in 3. CRYPTO was observed in 5 pts, 2 associated with *cytomegalovirus* (CMV) and 1 with *mikobacterium avium*. CMV was detected in tissue in 4 pts. The median survival time since diagnosis was four months although ARCHO was not directly implicated in dead.

Conclusions: AIDS related cholangiopathy is a late event in the natural history of the disease. The CBD is predominantly affected and sphinterectomy or surgical drainage was occasionally required with rapid and lasting disappearance of pain. CRYPTO and CMV are frequently involved however patients do not respond to medical treatment.

1854 Pathogenicity Factors of Campylobacter

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The aim of this research was to investigate some pathogenicity factors of thermophilic species of genus *Campylobacter* (TC) and evaluate their clinical significance for campylobacteriosis (C) – acute diarrhoeae disease, determined by these bacteria.

Fibronectin (F) and mucin (M) associated activities were studied using reaction of bacteriasorption; the alteration of F concentration in coprofiltrates – in ELISA on nitrocellulose filters; testing of adhesive activity (AA) was carried out on isolated epithelial cells (EC); and antilysozyme activity (AL) was estimated by method of delayed antagonism.

It was found, that 79% of TC strains actively connected with M, and almost 100% were possessed of F and AL in a varying degree. 91.5% of the same strains were possessed at AA to the different types of EC: 40.4% adhered to EC of small intestine; 57.5% – to EC of colon and 83.4% – to EC of Payer's plaques. There was not revealed the correlation between F, M and AL activities and clinical manifestation of C in children. On the contrary, AA closely correlated with it: TC strains with high AA degree to all EC types were isolated more frequently under painful form of C, than under slight one ($P < 0.05$). Analogously, as we have investigated earlier, the TC capability to produce enterotoxins closely correlated with C clinical manifestation.

Apparently, it is impossible to understand the pathogenesis of C without complex investigation of TC pathogenicity factors. In the same time, the F, M, AL activities of any TC strain remains the additional criteria only for evaluation of C severity.

1855 Candida Albicans Colonization in Duodenal Ulcer

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Fungi were considered as commensal microorganisms in the gut. For a long time *H. pylori* was also believed to be a commensal located in the gastric mucosa but growing evidence suggest that it may be the major etiologic factor in peptic ulcer disease. The purpose of this study was to show whether there exists a difference in 20 healthy control cases and 24 duodenal ulcer patients with respect to the presence of fungi.

During endoscopy, gastric juice and tissue specimens (from the normal bulbous in the control group and from the edge of ulcer in the patient group) were taken under sterile conditions. Microbiological identification of the fungi were done by cultures of the specimens. Those which can grow on a medium with a pH of 1.55, forming a germ tube with human serum and producing chlamyospore were considered to be as *Candida albicans*. API 20 C Aux identification system was performed for the classification of *Candida* species. Mac Manus PAS stain was used to demonstrate the fungi histopathologically.

Using the imprint technique, fungi were observed at a rate of 65% (controls) and 54.1% (patients) ($p > 0.05$) in the gastric juice while *C. albicans* grew in the same specimens significantly ($p < 0.05$) higher in the patients (62.5%) when compared with the controls (25%). The isolation rate of *C. albicans* in

the specimens taken from the edge of ulcer (45.8%) was higher ($p < 0.05$) than in the tissues obtained from the bulbous (15%) in controls. Histologically, fungi were seen only on the surface of the epithelium in the bulbous at a rate of 25% (controls) and 16.6% (patients) ($p > 0.05$).

The best method of demonstrating the presence of fungi and its species is the culture of the tissue specimens. The finding of the potentially most virulent species of fungi (*C. albicans*) predominantly in the duodenal ulcer patients but not in the healthy controls may suggest that they have some kind of role in the pathogenesis of ulcer disease similar to *H. pylori*. Histologically fungi do not induce deep tissue invasion in those cases.

1856 Effect of Proton Pump Inhibitor on Intestinal Microflora in Rats

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Effect of proton pump inhibitor (PPI: Omeprazole) on intestinal microflora was examined using rats.

Eight weeks aged Wistar rats were administered PPI, 50 mg/kg bw, for 8 weeks (group P) and the control rats were done solution (group C). We examined the change of intestinal microflora on 6 weeks and 8 weeks by faeces, and also examined the pH of each portion of gastro-intestinal tract.

As a result, *E. coli*, Bacteroides, Strept. faecalis, Strept. faecium and etc. was commonly detected in both groups. However, *Staphyl. aureus* appeared in 40% rats on 6 weeks and 20% ones on 8 weeks in group P only. The pH of gastrointestinal tract, only pylorus of stomach showed a difference between group P and C (P:pH 5.67 C:pH 1.48), body of stomach, short bowel and large bowel showed no difference between two groups.

Accordingly long term treatment of PPI change the environment of gastrointestinal tract including the intestinal microflora. So, this change may cause colitis by MRSA and take affect for carcinogenesis of colon.

1857 Combined Albendazole + Praziquantel Versus Albendazole Alone in the Treatment of Hydatid Disease

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The management of hydatid disease was only surgically before the 1970's. Then Mebendazole was used as medical treatment, but not effective. In the 1980's, Albendazole was introduced and several studies showed that it is effective but takes several months to give a good response. Praziquantel was observed in laboratory animals after 6 days and all proctoscolices were necrotic and dead by 12–18 days. There are no reports in the literature in the use of Praziquantel alone or with Albendazole in treatment of hydatid disease. We have started using combination treatment in Human Hydatid disease in September 1990. Between April 1985 and August 1990, we have used Albendazole alone in 22 patients with hydatid disease (mainly of the liver). In 8 patients (36.4%) there was complete disappearance of the cyst, in 4 of which treatment period ranges between 6 months to 2 years. The other 4 patients had rupture of liver cyst into the biliary tree and these had endoscopic removal of daughter cysts from biliary tree with complete recovery in a short period. The first report in the literature in endoscopic treatment of hydatid disease was reported from our hospital in 1985. Since September 1990, we have used combination treatment of Albendazole + Praziquantel in 19 patients, one of which had also percutaneous drainage of liver hydatid cyst. During a follow up period of 2 months-2 years and treatment period of only 2–6 months, there was complete disappearance of the hydatid cyst in 8 patients (42.10%) and over 50% reduction of the hydatid cyst in 5 patients (26.31%). Combination treatment of hydatid disease is effective and may replace surgery in the future.

1858 Bacterial Gastroenteritis in a Danish Population. A Retrospective study of Microbiology and Clinical Manifestations

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We performed a retrospective study of microbiology and clinical manifestations in patients who were hospitalized in Roskilde County with acute gastroenteritis in the period January 1991-January 1994. All patients with growth of pathogenic bacteria from the stools (*salmonella* species, *shigella* species, *Yersinia enterocolitica* or *campylobacter*) were included, in total 225 patients, 71 < 15 years and 154 > 15 years.

Sixty-one% of the episodes of gastroenteritis were caused by zoonotic salmonella, 2.5% by *Salmonella typhi*, 0.5% by *Salmonella paratyphi*, 22%

by *campylobacter*, 12% by *Yersinia enterocolitica* and 2% by *shigella* species. There was no significant difference in the distribution among different bacteria between children and adults. The incidence of acute gastroenteritis due to zoonotic salmonella severe enough to cause hospitalization tripled in the period 1991 to 1992 after which the level remained constant, in 1991: 9.2/100,000/year, in 1992: 28.1/100,000/year and in 1993: 25.8/100,000/year. No systematic change of the incidence of gastroenteritis caused by other bacteria was found.

Clinical data (abdominal pain, fever, vomiting, diarrhoea, blood in stools) and paraclinical data (CRP, leucocytes, hypersedimentation) as well as complications will be presented.

1859 Saccharomyces Boulardii Induces the Production of Pro-Inflammatory Cytokines In Vitro

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Saccharomyces boulardii (*S. boulardii*), a non-pathogenic yeast, is effective in preventing pseudomembranous colitis in animals and humans. In addition to the inhibition of the binding of *Clostridium difficile* toxin A to its intestinal receptor by the secretion of a trypsin-like protease, it has been suggested, that *S. boulardii* potentially stimulates the immune response. Therefore, we studied the *in vitro* effects of *S. boulardii* on interleukin 1 β (IL1), interleukin 6 (IL6) and tumor necrosis factor α (TNF) *in vitro* production by human monocytes.

Methods: After a 24 hour incubation blood monocytes (10⁶ cells/ml) of healthy donors were cultured 24 hours later in presence of *S. boulardii* (increasing yeasts/monocytes ratio: 5, 10, 20). The experiments were performed with living or dead yeasts (120°C, 20 min), with or without costimulation by interferon γ (IFN: 500 UI/ml) and lipopolisaccharides (LPS: 1 μ g/ml). Interleukin 1, IL6 and TNF were measured in the culture supernatants by mean of ELISA using monoclonal antibodies.

Results: *S. boulardii* stimulates IL1, IL6 and TNF production (cytokines concentrations are expressed in pg/ml).

Living <i>S. boulardii</i>	controls (con)	ratio = 5	ratio = 10	ratio = 20	p vs con
IL1	11 \pm 2	1087 \pm 0.5	3126 \pm 4.9	3868 \pm 2	0.01
IL6	121 \pm 4	19054 \pm 0.3	39900 \pm 0.1	36847 \pm 3	0.01
TNF	0	35564 \pm 0.0	182364 \pm 2.3	200000 \pm 0.7	0.01

Yeast viability or costimulation with IFN/LPS did not modify the response compared to stimulation with living *S. boulardii* alone.

Conclusions: (1) *S. boulardii* was shown to potentiate IL1, IL6 and TNF *in vitro* production by human monocytes. This effect was more important with the higher yeasts/monocytes ratio. (2) This stimulation did not depend on yeast viability and (3) was not potentiated by costimulation with IFN/LPS. (4) These results suggest an immunological action of *S. boulardii* which may contribute to its other recently described therapeutical effect in microbial intestinal infections.

1860 Effect of Lactulose and Bifidumbacterin on a Prevalence of Pinworms (Enterobius Vermicularis) in Children

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Presence of intestinal parasite is often complicated by disorders in intestinal microecology and dysbacteriosis. Numerous clinical trials confirmed an efficacy of Lactulose (INALCO) – synthetic disaccharide and Bifidum-bacterin (Gabrichevsky Institute) – *B. bifidum* preparation in improvement of gastrointestinal activity in adults and children.

Influence of a therapy with these drugs was studied in an open trial without placebo in 161 children of 3–6 years of age with pinworms. The first group of 56 children received 15 ml of Lactulose once a day for 30 days. The second one of 55 children received 2 \times 10⁹ of *B. bifidum* in 50 ml of milk once a day for 30 days. The third group of 50 children was a control.

All children were examined 3 times for presence of pinworm eggs after one month. The decrease of pinworm prevalence was 54 \pm 7%, 64 \pm 7% and 16 \pm 5% in 1, 2 and 3 groups subsequently.

All children remained infected were treated with the two standard daily courses of Medamine (Methyl ether of benzimidazol-2 carbamic acid) – original Russian antihelminthic with 100 per cent of curative rate.

More than 50% decrease in prevalence of enterobiasis among infected children was observed after one month of daily use of Lactulose and Bifidum-bacterin in the absence of a specific antihelminthic treatment. Improvement of health status and activity was observed in all treated children.

1861 Comparative Efficacy of Lactulose and Bifidum-Bacterine in the Treatment of Disturbances in the Microecological System of Large Intestine in Premature Infants

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The period of adaptation to the extrauterine life is commonly complicated by disorders in the microecological system of the large intestine (MSLI) that diminish the physiological resistance of the premature infants.

A comparison of Lactulose syrup (LS; Inalko, Italy) and lyophilized Bifidum-bacterine (LB; Russia, 1 dose is 10^8 B. bifidum I) effects on 75 premature infants at the gestational age 32.7 ± 0.2 weeks with the disturbances in MSLI was made. The Group 1 of 35 neonates received every day 1.0 ml of LS/kg. The Group 2 of 40 infants received 2.5 doses of LB/3 times a day. The course of the treatment lasted for 14 days. All the babies were fed with native breast milk.

The study of the infants included a general clinical examination; bacteriological examination of the feces; the study of the coprogramm, immunoglobulin A, G, M in coprofiltrates, and fecal pH / $p < 0.05$ was considered to be significant.

After the treatment dyspeptic disorders disappeared in 90% and intestinal microflora normalized in 85% of neonates of Group 1. Normalization of above mentioned disorders after LB treatment was observed respectively only in 56% and 25% of neonates of Group 2. LS treatment led also to coprogramm normalization as well as to the significant decrease in immunoglobulin A content in coprofiltrates and fecal pH values.

Thus utilization of LS in the treatment of the premature infants with disturbances in MSLI was more effective than that of LB.

1862 Helicobacter Pylori in HIV-1 Seropositive Patients

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Two hundred and ten dyspeptic patients, both HIV-1 +ve and HIV-1 -ve, (M/F 153/57; age range 18-52, mean 30 yrs) living in a closed Community for ex drug abusers were investigated for Helicobacter pylori (HP) infection by upper gastrointestinal endoscopy and serology.

Control group by serology were: A) 259 asymptomatic subjects, both HIV-1 +ve and HIV-1 -ve, living in the same Community, B) 219 age and sex matched dyspeptic patients, C) 322 asymptomatic blood donors.

Results: The table shows the endoscopic findings in the endoscoped patients according to HIV and HP status (N = normal, OCV = oesophageal candidosis and/or varices, AG = antral gastritis, PU = peptic ulcer, GC = gastric cancer, ED = erosive duodenitis)

	N	OCV	AG	PU	ED	GC
HIV+ve (n = 111)						
HP+ (n = 44)	5	4	17	9	9	0
HP- (n = 67)	23	26	11	0	7	0
HIV-ve (n = 99)						
HP+ (n = 65)	3	0	32	22	8	0
HP- (n = 34)	12	1	16	0	4	1

The overall prevalence of HP infection in the endoscoped patients was 52%. Infection was more common in HIV-1 -ve (65/99, 66%) than the HIV-1 +ve patients (44/111, 40%) ($P < 0.001$). HIV-1 +ve patients with AIDS had a lower prevalence of HP infection (24/73, 33%) compared to HIV-1 +ve patients without AIDS (20/38, 53%) ($P = 0.05$).

The seroprevalence rates of HP infection were similar in the dyspeptic patients (52%) and asymptomatic subjects (56%) living in S. Patrignano, and in the dyspeptic control patients not living in the Community (55%). Asymptomatic blood donors showed a lower seroprevalence of infection (33%, $P < 0.001$).

Conclusion: (1) HIV-1 positivity do not play a role in the development of HP infection, whereas the pivotal role is probably due to life in community. (2) Apart from candidiasis unusual gastroduodenal pathology is rare in HIV-1 +ve dyspeptic patients.

1863 Functional and Structural Changes of Small Intestine in HIV Infected Patients with Chronic Diarrhea

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HIV infection is often associated with unexplained diarrhea and weight loss. This study was designed to see if abnormalities of the intestinal mucosal architecture could explain the enteric dysfunction found in HIV infected patients with diarrhea.

20 far coming HIV infected patients (19 men, 1 woman, CD4 0.01-0.2) with apparently non-infectious chronic diarrhea were evaluated with a new intestinal function test (D-xylose breath test) and, for fifteen of the subjects, with an upper intestinal endoscopy with biopsy specimens taken from the duodenal mucosa.

The function test showed that the D-xylose uptake was largely decreased in the same manner as for patients with celiac disease. The severe malabsorption could hardly be explained by the slight mucosal derangement seen at light microscopy with partial villous atrophy and unspecific inflammation. However, electron microscopy showed enterocytes with signs of hypofunction and degeneration.

The ultrastructural changes of the mucosa appear to be the best morphological explanation to the intestinal malabsorption found in far coming HIV infected patients with chronic diarrhea.

1864 Serum Lipids in Patients with Acute Pancreatitis

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Hyperlipidemia may be the cause of acute pancreatitis (AP) or a sequelae of peripancreatic fat necrosis.

The aim of this study was the evaluation of serum lipids, ie cholesterol (CH), triglycerides (TG) and HDL-cholesterol (HDL-CH) in patients with AP, in relation to the time course of the disease. 37 patients were studied. In 32 patients AP was due to gallstones (Group A) and hyperlipidemia was the causative factor in 5 (Group B). Methodology included biochemical tests (WBC, serum and urine amylase, serum creatinine, bilirubin, SGOT, SGPT), ultrasound, CT scan of the abdomen, ERCP and determination of serum lipids on 1, 3 and 15, after the onset of AP. Results were as follows (mean \pm SD)

	Serum lipids in Group A* (mg/dl)			
	CH	TG	HDL-CH	
Day 1	188 \pm 45	112 \pm 25	34 \pm 5	
Day 3	188 \pm 47	118 \pm 25	35 \pm 6	*No significant difference
Day 15	201 \pm 51	126 \pm 35	36 \pm 6	

	Serum lipids in Group B (mg/dl)			
	CH	TG	HDL-CH	
Day 1	520 \pm 82	2091 \pm 128**	33 \pm 0.7	*p < 0.1
Day 3	540 \pm 80	650 \pm 212	33 \pm 0.7	**p < 0.1
Day 15	285 \pm 50*	555 \pm 253	34 \pm 0.8***	***NS

In summary: (1) No significant changes in serum lipids were noted in patients with AP due to gallstones during the time course of the disease (day 1, 3, 15), (2) In patients with AP due to hyperlipidemia, a significant elevation of serum CH and TG was noted on day 1 but did not return to normal. TG levels declined significantly on day 3 and 15.

Conclusions: (1) Serum lipids fluctuate during the course of hyperlipidemic pancreatitis, but remain elevated, (2) no significant changes of serum lipids were noted in biliary pancreatitis.

1865 Is Biliary Lithiasis Associated with Pancreatographic Changes?

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We analyzed retrospectively the endoscopic retrograde cholangiopancreatography of 165 patients presenting biliary lithiasis and of 53 controls. Among the 165 patients, 35 had gallstones, 53 had gallstones and cholelithiasis, 10 had cholelithiasis without gallstone, 50 cholecystectomized patients had cholelithiasis, 17 had undergone cholecystectomy without recurrence of biliary lithiasis. Analyzing the pancreatography, we measured the diameter of the pancreatic duct in the head, the body and the tail of the pancreas, the regularity of the main pancreatic duct and the presence of stenosis, the regularity or the dilatation of secondary ducts, the presence of cysts. In addition, we calculated a score based on the above parameters: pancreatographies were classified as normal or with mild, intermediate, moderate, severe abnormalities. In patients, no statistical difference for the pancreatographic features was found in case of cholelithiasis compared to patients without cholelithiasis. Patients were comparable to controls for sex, alcohol consumption but not for age (68 vs 55 years, $p < 0.01$). In patients and in controls, the presence of abnormalities of the pancreatography well correlated with age. The pancreatographic features of patients and controls were not found to be significantly different, even in younger controls.

Finally, multivariate analysis (stepwise multiple discriminant analysis) was performed. The age appeared as the only significant factor which was able to predict the presence of pancreatographic abnormalities.