CROATIAN MEDICAL JOURNAL
CMJ

44(4):508-509,2003

CROATIAN INTERNATIONAL PUBLICATIONS

Kaštelan M, Gruber F, Čečuk-Jeličić E, Grubić Z, Kaštelan A. A new extended haplotype Cw*0602-B57-DRB1*0701-DQA1*0201-DQB1*0201 associated with psoriasis in the Croatian population. Clin Exp Dermatol 2003;28:200-2.

Department of Dermatology, Rijeka University Hospital Center, Rijeka; and Tissue Typing Centre, Zagreb University Hospital Centre, Zagreb, Croatia

In this study the authors analysed the distribution of HLA class II alleles and the extended haplotype HLA-Cw-B-DRB1-DQA1-DQB1 in Croatian patients with type I and type II psoriasis by hybridization with specific oligonucleotide probes. Type I psoriasis showed a significant association with the DRB1*0701 ($p < 0.00001$; relative risk/RR = 5.83), DQA1*0201 ($p < 0.00001$; RR = 6.12), DQB1*0201 ($p = 0.0006$; RR = 3.29) and DQB1*0303 alleles ($p = 0.0008$; RR = 7.51). A negative correlation with type I disease was observed for the DQA1*0102 allele ($p = 0.002$; RR = 0.26). Type II psoriasis did not show any association with any class II alleles. The extended haplotype HLA-Cw*0602-B57-DRB1*0701-DQA1*0201-DQB1*0201 was present at a significantly higher frequency in type I patients ($p < 0.00001$; RR = 7.72). However, this haplotype was not detected at all in patients with type II psoriasis. In conclusion, the extended haplotype HLA-Cw*0602-B57-DRB1*0701-DQA1*0201-DQB1*0201 is a risk haplotype for type I disease in the Croatian population. This particular haplotype has not been reported previously in association with psoriasis in any other ethnic groups.

Kušić B, Gašparov S, Katičić M, Dominis M, Antica M. Monoclonality in Helicobacter pylori-positive gastric biopsies: an early detection of mucosa-associated lymphoid tissue lymphoma. Exp Mol Pathol 2003;74:61-7.

Ruđer Bošković Institute, Division of Molecular Medicine, Laboratory for Cellular and Molecular Immunology, Zagreb, Croatia

Mucosa-associated lymphoid tissue (MALT) is not present in healthy gastric mucosa, but it can develop in sites of long-persisting inflammation and is connected with the development of MALT lymphoma. A monoclonal lymphocyte population is one of the characteristics of such lymphomas. In this study the authors analyzed gastric biopsies (formalin fixed and paraffin embedded or frozen) in 93 patients with dyspepsia accompanied by *Helicobacter pylori* infection. They applied PCR and single-cell immunocytochemistry to detect the clonality of the gastric B-cell population. Immunocytochemistry performed on 33 frozen biopsies showed two samples with monoclonal pattern. PCR analysis of immunoglobulin heavy-chain (IgH) gene rearrangements revealed two monoclonal populations out of 161 biopsies from 60 patients. The authors conclude that PCR analysis was the most sensitive method, which gave insight into the nature of the earliest stage of MALT lymphoma in gastric biopsies.

Kuterovac-Jagodić G. Posttraumatic stress symptoms in Croatian children exposed to war: a prospective study. J Clin Psychol 2003;59:9-25.

University of Zagreb, Zagreb, Croatia

This study examined symptoms of posttraumatic stress in 252 school-aged children from Osijek, Croatia, which was subjected to massive military attacks from Yugoslavian forces. The children's symptoms were assessed in 1994 while the war was still going on and 30 months later when the war was over. In addition to changes in posttraumatic stress disorder symptoms over time, the study examined the predictive power of: 1) different types and number of war traumata; 2) loss of social community; 3) the children's demographic characteristics (age and gender); 4) types of coping strategies and locus of control; and 5) the perceived availability of different kinds of social support. Although symptoms of posttraumatic stress declined over time, 10% of the children reported a severe level of symptomatology 30 months after the war. The results supported the hypothesized predictive power of all investigated factors for predicting short- and long-term posttraumatic stress reactions.

Lukač J, Mravak-Stipetić M, Knežević M, Vrček J, Sistig S, Ledinsky M, et al. Phagocytic functions of salivary neutrophils in oral mucous membrane diseases. J Oral Pathol Med 2003;32:271-4.

Department of Oncology and Nuclear Medicine, Department of Oral Medicine, and Department of Surgery, Sisters of Mercy University Hospital and School of Dental Medicine, Zagreb, Croatia

Phagocytic functions of salivary polymorphonuclear neutrophils (sPMNs) were determined in 15 patients with acute recurrent aphthous ulceration (RAU), 11 patients with oral lichen planus (OLP) and 20 healthy volunteers. In healthy subjects, the same parameters were also determined in peripheral blood polymorphonuclear neutrophils (bPMNs). Phagocytic activity (proportion of ingesting cells, PA), ingestion ability (number of ingested targets per 100 phagocytes, IA) and intracellular microbicidity (proportion of killed targets, IM) of PMNs separated from peripheral blood and the whole unstimulated saliva were determined by acridine orange method with living yeast cells as targets. Salivary PMNs in healthy individuals showed significant reduction in PA (33% vs. 76%; $p < 0.009$) and IA (0.47% vs. 2.93%; $p < 0.009$) and significant increase in IM (12.0% vs. 5.5%; $p = 0.011$) in comparison with bPMNs. In RAU patients, reduced PA (27% vs. 37%; $p = 0.035$) and IA (0.25% vs. 0.47%; $p = 0.05$) were detected, while in OLP patients enhanced IM was detected (12% vs. 19%; $p = 0.033$) in comparison with healthy controls. In conclusion, sPMNs present functional features distinct from those in peripheral blood. Some phagocytic functions of sPMNs are reduced in RAU and enhanced in OLP, indicating their role in pathogenesis or reflecting clinical changes in these conditions.

Kukura V, Zovko G, Ciglar S, Markulin-Grgić L, Šantek F, Podgajski M, et al. Serum CA-125 tumor marker in endometrial adenocarcinoma. Eur J Gynaecol Oncol 2003;24:151-3.

Department of Gynecology and Obstetrics, Merkur University Hospital, Zagreb, Croatia

One hundred and seventy-four patients, mean age 61.23±9.41 years old, with irregular perimenopausal haemorrhage were included in the study. Fractional curettage was performed in all patients. When the pathohistologic findings were adenocarcinoma the concentration of CA-125 tumor marker was determined. Hysterectomy with bilateral salpingo-oophorectomy was determined. In 142 cases carcinoma was restricted to the uterus and in 32 patients extrauterine metastatic disease was found. In the former group CA-125 was positive in 130 patients with a mean value of 64.12±22.41 U/mL serum. In the latter group the cancer antigen was positive in 29 patients with a

mean value of 244.82±68.11 U/mL. High production is associated with increased metastatic potential.

Škrabić V, Zemunik T, Šitum M, Terzić J. Vitamin D receptor polymorphism and susceptibility to type 1 diabetes in the Dalmatian population. Diabetes Res Clin Pract 2003;59:31-5.

Department of Pediatrics, Split University Hospital Center, Split, Croatia

Several studies have found a relationship between polymorphisms of the vitamin D receptor gene (VDR) and development of type 1 diabetes (T1DM). The meaning of this observation remains unclear and its relevance must be checked in different population samples. To examine the association of VDR polymorphisms and susceptibility to T1DM in the Dalmatian population of South Croatia the authors studied 134 individuals with type 1 diabetes and 132 control subjects. VDR genotyping was performed using PCR and BsmI, ApaI and TaqI restriction enzymes. Data were analysed using the chi^2-test. The genotype combination which conferred strongest susceptibility to T1DM was BBAAtt ($p = 0.002$). Interestingly, the BAt haplotype was found to be a risk factor in a German population, the only European population tested thus far. The results indicate that VDR polymorphisms are associated with increased risk of T1DM in the Dalmatian population of South Croatia and warrant further studies.

Turk N, Milas Z, Margaletić J, Starešina V, Slavica A, Riquelme-Sertour N, et al. Molecular characterization of *Leptospira spp*. strains isolated from small rodents in Croatia. Epidemiol Infect 2003;130:159-66.

Department of Microbiology and Infectious Diseases, Zagreb University School of Veterinary Medicine, Zagreb, Croatia

The authors report the isolation and characterization of 16 *Leptospira* spp. strains isolated from small rodents captured in 11 different regions of inland Croatia. Large NotI and SgrAI restriction fragment allowed to assign 10 isolates to the serovar istrica, 5 isolates to the serovar tsaratsovo and 1 isolate to the serovar lora. The phylogenetic analysis conducted from the sequences of the first 330 bp from the 16S rDNA gene revealed that the strains belonged to three different species, *L. borgpetersenii*, *L. kirschneri* and *L. interrogans*. Carrier rates in eight rodent species varied from 0 to 71.4%. *Mus musculus* showed the highest infection level and confirmed its role as a major reservoir of the serogroup Sejroe. For the first time we reported the occurrence of serovars tsaratsovo and lora in Croatia.

Zoričić S, Marić I, Bobinac D, Vukičević S. Expression of bone morphogenetic proteins and cartilage-derived morphogenetic proteins during osteophyte formation in humans. J Anat 2003;202(Pt 3):269-77.

Department of Anatomy, Rijeka University School of Medicine, Rijeka, Croatia

The authors used immunohistochemical methods to investigate the distribution of bone morphogenetic protein (BMP)-2, -3, -5, -6, -7, and cartilage-derived morphogenetic protein (CDMP)-1, -2, -3 in human osteophytes (abnormal bony outgrowths) isolated from osteoarthritic hip and knee joints from patients undergoing total joint replacement surgery. All osteophytes consisted of three different areas of active bone formation: 1) endochondral bone formation within cartilage residues; 2) intramembranous bone formation within the fibrous tissue cover and 3) bone formation within bone marrow spaces. The immunohistochemistry of certain BMPs and CDMPs in each of these three different bone formation sites was determined. The results indicate that each BMP has a distinct pattern of distribution. Immunoreactivity for BMP-2 was observed in fibrous tissue matrix as well as in osteoblasts; BMP-3 was mainly present in osteoblasts; BMP-6 was restricted to young osteocytes and bone matrix; BMP-7 was observed in hypertrophic chondrocytes, osteoblasts and young osteocytes of both endochondral and intramembranous bone formation sites. CDMP-1, -2 and -3 were strongly expressed in all cartilage cells. Surprisingly, BMP-3 and -6 were found in osteoclasts at the sites of bone resorption. Since a similar distribution pattern of bone morphogenetic proteins was observed during embryonal bone development, it is suggested that osteophyte formation is regulated by the same molecular mechanism as normal bone during embryogenesis.

Ćorović N, Duraković Z, Mišigoj-Duraković M. Dispersion of the corrected QT interval in the electrocardiogram of the ex-prisoners of war. Int J Cardiol 2003;88:279-83.

Institute for Medical Research and Occupational Health, Zagreb, Croatia

The study of electrocardiograms (ECGs) was performed in a subgroup of 181 men, ex-prisoners of war with mean age 35.8±11.0 years and mean duration of imprisonment 164.5± 87.1 days, chosen at random from the total sample of released prisoners ($n = 1458$). The control group was pair-matched. The analysis of ECGs was done according to the Minnesota code, and Bazett's formula gave the values of the corrected QT interval (QT(c)). The dispersion of the QT(c) interval is determined by the difference between the longest and the shortest measured QT(c) interval in each ECG lead. The results of descriptive statistics in the group of ex-prisoners showed the range of QT(c) dispersion of 8.0-122.0 ms (mean 52.4±21.6 ms), while in the control group the range was 6.0-72.0 ms (mean 30.4±13.8 ms) ($df = 360$, $t = 11.536$; $p < 0.001$). The QT(c) interval from 422.0 to 480.0 ms had 60.2% ex-prisoners and 30.4% controls, while a QT(c) interval over 480.0 ms had 19.3% ex-prisoners and 1.10% controls ($p < 0.0001$). In the ex-prisoners group, the QT(c) dispersion over 50 ms was present in 51.4%; of those, a dispersion of 95 ms and more was found in 3.9%, while in the controls a QT(c) dispersion over 50 ms was found in 8.3%, but a dispersion of 95 ms and more was not recorded ($p < 0.0001$). The odds ratio estimated for the prolonged QT(c) interval was 8.467 and for enlarged QT(c) dispersion it was 11.695 in the ex-prisoners versus controls ($p < 0.001$). In conclusion, persons exposed to long-term maltreatment in detention camps have significantly greater QT(c) dispersion, as well as a higher relative risk of prolonged QT(c) interval and greater QT(c) dispersion than a control group.