
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. Type I psoriasis showed a significant association with the DRBI*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.


Ruder 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 prolonged 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) of 508 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 hypothesis of early detection of mucosa-associated lymphoid tissue lymphoma.


Ruder 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 prolonged 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) of 508 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 hypothesis of early detection of mucosa-associated lymphoid tissue lymphoma.


Ruder 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 prolonged 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) of 508 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 hypothesis of early detection of mucosa-associated lymphoid tissue lymphoma.


Ruder 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 prolonged 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) of 508 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 hypothesis of early detection of mucosa-associated lymphoid tissue lymphoma.


Ruder 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 prolonged 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) of 508 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 hypothesis of early detection of mucosa-associated lymphoid tissue lymphoma.
mean value of 244.82±68.11 U/mL. High production is associ-
ated with increased metastatic potential.


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

Several studies have found a relationship between polymor-
phisms of the vitamin D receptor gene (VDR) and development of type 1 diabetes (T1DM). The meaning of this observation re-
 mains unclear and its relevance must be checked in different popula-
tion samples. To examine the association of VDR polymorphisms and susceptibility to T1DM in the Dalmatian popula-
tion of South Croatia the authors studied 134 individu-
als with type 1 diabetes and 132 control subjects. VDR geno-
typing was performed using PCR and BsmI, Apal and TaqI re-
striction enzymes. Data were analysed using the chi²-test. The genotype combination which conferred strongest suscepti-
bility to T1DM was BBAAtt (p = 0.002). Interestingly, the BAt haplotype was found to be a risk factor in a German popula-
tion, the only European population tested thus far. The results indicate that VDR polymorphisms are associated with in-
creased risk of T1DM in the Dalmatian population of South Croatia and warrant further studies.


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 re-
striction 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 se-
quencies of the first 330 bp from the 16S rDNA gene revealed that the strains belonged to three different species, L. borgpe-
tersenii, 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 res-
dervoir of the serogroup Sejroe. For the first time we reported the occurrence of serovars tsaratsovo and lora in Croatia.


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

The authors used immunohistochemical methods to investi-
gate 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 out-
growths) isolated from osteoarthritic hip and knee joints from patients undergoing total joint replacement surgery. All osteo-
phytes consisted of three different areas of active bone forma-
tion: 1) endochondral bone formation within cartilage resi-
dues; 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 dis-
tinct pattern of distribution. Immunoreactivity for BMP-2 was ob-
served 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 carti-
lage cells. Surprisingly, BMP-3 and -6 were found in osteoclasts at the sites of bone resorption. Since a similar distribution pat-
tern of bone morphogenetic proteins was observed during em-
bryonal bone development, it is suggested that osteophyte for-
mation is regulated by the same molecular mechanism as nor-
mal bone during embryogenesis.


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 164.3±
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 inter-
val (QT(c)). The dispersion of the QT(c) interval is determined by the difference between the longest and the shortest mea-
sured QT(c) interval in each ECG lead. The results of descrip-
tive statistics in the group of ex-prisoners showed the range of QT(c) dispersion of 8.0-122.0 ms (mean 32.4±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) in-
terval from 422.0 to 480.0 ms had 60.2% ex-prisoners and 19.3% ex-prisoners and 1.10% controls (p<0.0001). In the ex-prisoners group, the QT(c) dispersion over 50 ms was pres-
ent 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 pro-
longed QT(c) interval was 8.467 and for enlarged QT(c) disper-
sion it was 11.695 in the ex-prisoners versus controls (p<0.001). In conclusion, persons exposed to long-term mal-
treatment 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.