CMJ - December 1998 (Volume 38, Number 4)

CIP

***Antica M, Wu L, Scollay R. Stem-cell antigen-2 expression in adult and developing mice. Immunol Let 1997; 55:47-51.**

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Stem cell antigen 2 (Sca-2) expression can distinguish the most immature T-lymphocyte precursors in the thymus from the hemopoietic stem cells. Sequence analysis of the Sca-2 protein showed that Sca-2 is a glycosylphosphatidylinositol (GPI) anchored molecule that shares some characteristics with the members of the Ly-6 multigene family, and that it is the same as the thymic shared antigen-1 (TSA-1). Here we extend these studies and critically reassess the expression of the Sca-2/TSA-1 antigen in hematopoietic tissues of adult and developing mice. With more sensitive methods we show that the distribution of Sca-2/TSA-1 differs from existing reports. We find especially high expression of Sca-2/TSA1 at day 14 of fetal development.

Brkiæ H, Strinoviæ D, Šlaus M, *Škaviæ J, Zeèeviæ D, Miliæeviæ M. Dental identification of war victims from Petrinja in Croatia. Int J Legal Med 1997; 110:47-51.

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Soon after Croatian forces regained Petrinja in 1995, four mass graves were discovered from which the bodies of 46 civilians, 38 males and 8 females, were recovered. Identification of the victims was performed at the Department of Forensic Medicine and Criminology at the School of Medicine in Zagreb. A total of 27 victims (59%) were identified, while 19 (41%) are at present still unidentified. Identification by supportive and anthropological evidence was achieved in 43% of cases, while identification based only on dental records was achieved in 16%. The most useful dental characteristics for the purpose of identification were fixed and removable prosthetic appliances for oral rehabilitation. The reason for the low number of dental identifications was the lack of antemortem dental data which could be compared with postmortem dental records.

Flomen RH, Gorman PA, Vatcheva R, Groet J, *Barišiæ I, Ligutiæ I, Sheer D, Nižetiæ D. Rieger syndrome locus: a new reciprocal translocation T(4-12)(Q25-Q15) and a deletion Del(4)(Q25Q27) both break between markers D4S2945 and D4S193. J Med Genet 1997;34:191-195.

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Rieger syndrome (RS) is an autosomal dominant disorder of morphogenesis characterised by malformation of the anterior segment of the eye, dental hypoplasia, and failure of the periumbilical skin to involute. In this paper we localize the proximal breakpoint of this deletion from the original patient, and we describe a new family with a de novo balanced reciprocal translocation t(4;12)(q25;q15) segregating with full RS in two generations. Using FISH and the P1 artificial chromosomes (PACs) as probes, we have physically localized both the deletion and the translocation breakpoints between genetic markers which are known to be strongly linked to RS. We have mapped both the proximal deletion breakpoint and the translocation breakpoint within a region between two groups of PACs bearing the markers D4S2945 (on the centromeric side) and D4S193 and D4S2940 (on the telomeric side). We believe that these recombinant bacterial clones derived directly from genomic DNA will be valuable complementary tools in the efforts to clone the RS gene and to construct a full transcriptional and sequence ready map of this region.

***Grubiæ Z, Žunec R, Kaštelan A. Striking diversity of DR15 haplotypes in Croatians. Tissue Antigens 1997;49:180-182.**

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Analysis of HLA class II polymorphism revealed DR2 as the most frequent antigen in Croats (20, 9%). The observed DR2 subtypes and their frequencies were as follows: DRB1*160l - 9.9%; 1501 - 8.5%; 1602 - 1.8%, 1502 - 1.4% and 1503 - 0.7%. Furthermore, analysis of probable DRB1-DQA1-DQB1 haplotype associations in unrelated individuals revealed a high diversity of DR15 haplotype associations. Now, to confirm this observation from unrelated individuals, family studies have been performed. Sixty-eight families, with at least one parent and one offspring DR2 ositive, have been studied. DRB1*1601-DQA1*0102-DQB1 *0502 seemed to be conserved haplotype in Croats while DRB1*15 haplotypes showed extremely high diversity. Seven rare DR15 haplotypes were observed; six of these appeared twice and one only once. Two haplotypes appeared to be unique for Croats: DRB1*1501-QA1*0102-DQB1*0501 and DRB1*1501-DQA1*0102-DQB1*0604. This confirmation of extremely high diversity of DR15 haplotypes in Croats is a valuable tool for unrelated bone marrow transplantation and DR2 disease association studies.

***Joviæ A, Troskot R. Recovery of atrial systolic function after pharmacological conversion of chronic atrial fibrillation to sinus rhythm. A Doppler-echocardiographic study. Heart 1997;77:46-49.**

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The goal of this study was to evaluate the time course of the recovery of atrial mechanical function after pharmacological cardioversion of chronic atrial fibrillation to sinus rhythm. A total of 21 patients (12 male and 9 female, aged 37-77 years) with chronic atrial fibrillation were followed up by serial transmitral pulsed Doppler-echocardiography. Echocardiographic studies were performed within the first 24 hours and on day 8, 15, and 30 after cardioversion. Our results suggested that restoration of atrial mechanical function after pharmacological cardioversion in patients with chronic atrial fibrillation was slow and gradual, as it was after electrical DC restoration of sinus rhythm. This time course may have important implications for determining how long treatment with anticoagulants and antiarrhythmic agents needs to continue in individual patients. It will also influence the clinical assessment of the haemodynamic benefit of restoring sinus rhythm in patients with chronic atrial fibrillation.

***Krušlin B, Hrašæan R, Manojloviæ S, Paveliæ K. Oncoproteins and tumor-suppressor proteins in congenital sacrococcygeal teratomas. Pediatr Pathol & Lab Med 1997;17:43-52.**

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Congenital sacrococcygeal teratoma (SCT) is the most common germ cell tumor of infancy and childhood with a female preponderance. Almost nothing is known about possible oncogene activation or tumor suppressor inactivation in these rare tuners. We described the presence of various oncoproteins and tumor suppressor proteins in eight cases of congenital SCT. The following oncogenes were examined: ras family (c-H-, c-N-, and c-K-ras), early genes (fos, jun), and tumor suppressor genes (p53 and nm23-H-1). There was no relationship between the intensity of expression of these oncoproteins and tumor suppressor genes and the following parameters: tumor size, age, and survival of the patients. There was no difference in the expression of oncogenes and tumor suppressor genes nm23 and p53 between immature and mature teratomas. Our findings suggest that the ras family of oncogenes, fos and jun oncogenes, and nm23 and p53 tumor suppressor genes are present in congenital SCT, indicating a possible role in genesis and development of these tumors.

***Medica I, Markoviæ D, Peterlin B. Genetic epidemiology of myotonic dystrophy in Istria, Croatia. Acta Neurol Scand 1997;95:164-166.**

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We evaluated epidemiology of myotonic dystrophy in Istria, Croatia including direct mutation analysis as an additional, specific diagnostic criterion. Patients were ascertained in the period 1980-1994 from multiple sources under established clinical criteria with a special reference to congenital and minimal forms of the disease. Additionally, patients and their relatives were evaluated by direct mutation analysis. The prevalence, corrected for underascertainment, was estimated on July 1, 1989. A total of 33 DM patients from nine families were ascertained. In all families the diagnosis was confirmed by mutation analysis of the DM gene. After correction for underascertainment the prevalence of 18.1/100,000 was calculated. Our results imply the importance of ascertainment of patients with all forms of DM and utilization of specific diagnostic tests for estimation of genetic epidemiology in DM.

***Miriæ D, Eteroviæ D, Giunio L, Dujiæ Z, Fabijaniæ D, Hozo I, Kuzmaniæ A, Božiæ I, Æuliæ V. Triggers of acute myocardial infarction regarding its site. Int J Cardiol 1997;60:67-71.**

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We studied the incidence of possible triggers of the myocardial infarction regarding its site in 750 patients with anterior and 731 patients with inferior infarction. Infarctions occurred most frequently without recalling any triggering activity, especially in patients with anterior infarction (67 vs. 44%). Physical effort as the possible precipitator was also more frequent in anterior infarctions (22 vs. 16%). However, the onset of inferior infarction was more frequent during meteorological stress (9 vs. 2%), emotional stress (10 vs. 3%), after overeating (13 vs. 3%) and nicotine abuse (6 vs. 1.5%). These triggers were independent and highly significant ($p<0.02$) discriminators of the site of myocardial infarction. Bimodal circadian rhythm, with primary peak between 6 and 9 a.m. and the secondary peak between 3 and 6 p.m. was observed in patients who did not recall any triggering activity, and this was more pronounced in patients with inferior infarction. These results support the hypothesis that the influence of the vegetative tone is most pronounced in the onset of myocardial infarction of inferior wall.

***Vodopija R, Lafont M, Baklaiæ Z, Ljubièiæ M, Svjetlièiæ M, Vodopija I. Persistence of humoral immunity to rabies 1100 days after immunization and effect of a single booster dose of rabies vaccine. Vaccine 1997;15:571-574.**

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Forty-four vaccinees immunized with rabies vaccine and human rabies immunoglobulin according to the abbreviated intramuscular regimen (the 2-1-1 schedule) were followed-up after 1100 days and had their blood samples taken. The persistence of rabies neutralizing antibody was proven in the sera of all vaccinees, 56% of whom demonstrated titres ³ 0.5 IU/mL. At the same day the vaccinees were given a single booster dose of vaccine the effect of which was measured 2 weeks later. With the RFFI rest on day 1114, sera revealed an extraordinarily high booster response in all 44 vaccinees. The study proved the anamnestic response after a full course of rabies vaccination to be a very stable one, and the capability of a single booster dose of vaccine to evoke high-titred rabies antibody response. Of the four vaccines used in the study, under comparable conditions, HDCV proved superior to PCECV, PDEV and PVRV on all 3 days of serology - 35, 1100 and 1114, though this difference was statistically significant only on days 35 and 1114.

Ziegler H, Thale R, *Luèin P, Muranyi W, Flohr T, Hengel H, Farrell H, Rawlinson W, Koszinowski UH. A mouse cytomegalovirus glycoprotein retains MHC Class-I complexes in the ergic/cis-Golgi compartments. Immunity 1997;6:57-66.

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The principle by which mouse cytomegalovirus blocks antigen presentation in the MHC class I pathway was investigated. The responsible gene m152, encoding a type I transmembrane glycoprotein of 40 kDa, is a member of a gene family located in the right-hand terminal region of the 230 kb virus genome. Expression of m152 in murine and human cells arrested the export of mouse class I complexes from the ER-Golgi intermediate compartment/cis-Golgi compartment and inhibited lysis by cytotoxic T cells. The plasma membrane transport of human MHC class I molecules was not

affected. The deletion of the cytoplasmic tail of gp40 did not increase its effect on class I molecule export, indicating that this protein differs in its functions from known immunosubversive viral gene products and represents a novel principle by which a herpesvirus shuts off MHC class I function.