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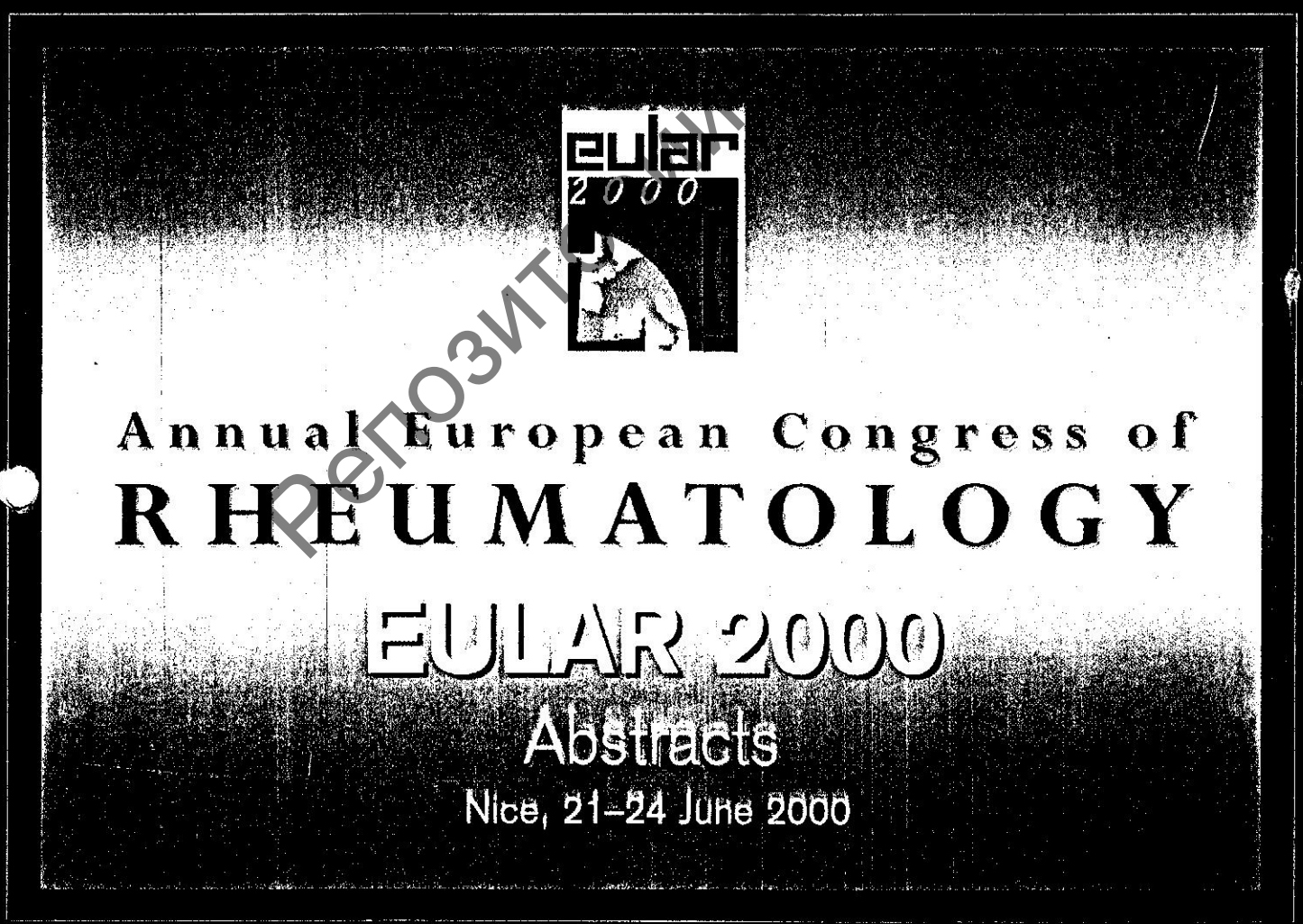

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Cartilage in Health and Disease

T-010 EFFECT OF EXPERIMENTAL SMOKING DEMONSTRATED IN ARTICULAR CARTILAGE OF ALBINO RATS

M.H. Salama[1], H.M. Bassiouni[1], M.H. Bassiouni[1], I. Hegazi, A. Osman.
[1]Dept. of Rheumatology and Rehabilitation, Biochemistry and Pathology, Faculty of Medicine-Al Azhar Univ., Cairo, Egypt

Objective: To study the effect of passive smoking on normal articular cartilage in albino rats by histopathologic and morphometric analysis.

Methods: 36 adult albino rats 2–3 months old were used for the study. Thirty of them were subjected to daily heavy tobacco inhalation for three months in a dose equivalent to 1 mg nicotine/kg b.w./day. The remaining six, were left as controls. Knee paraffin sections were prepared after sacrificing the rats, stained with H&E and Masson's trichrome. Morphometric analysis was done using an image analyzer with an optical magnification of 400 on routine H&E sections.

Results: Histopathologic changes were noted in the smoking group in 22 rats out of 30. Mild to sever proliferation with obliteration of the joint spaces was marked. Masson's trichrome stain showed proliferation of collagen bundles. Morphometric evaluation ranged from 72.85um to 175.02um confirming histopathology.

Conclusion: Experimental heavy smoking in albino rats had a deleterious effect on the integrity of articular cartilage leading to severe proliferation in addition to increased water content of collagen matrix, which is known to precede degeneration.

Rheumatoid Arthritis – Etiology and Pathogenesis

T-011 RELEVANCE OF HLA-DRB1*01 IN THE HUNGARIAN ELDERLY WITH RHEUMATOID ARTHRITIS AND POLYMYALGIA RHEUMATICA

Zs. Schmidt, K. Rajczy[1], Á. Megyeri, Zs. Balogh. *Institute of Rheumatology and Physioherapy; [1]National National Institute of Hematology and Immunology, Budapest, Hungary*

Possible associations of HLA-DRB1 alleles with rheumatoid arthritis (RA) and polymyalgia rheumatica (PMR) in the Hungarian elderly were studied.

26 patients with elderly onset RA (EORA) and 25 with PMR ± giant cell arteritis (GCA) were selected for the study. EORA was diagnosed as RA (the revised ACR criteria, 1987) starting after the age of 60, PMR according to Healey's criteria. 37 age matched volunteer bone marrow donors served as controls. HLA typing was performed by serology and by molecular typing (DRB1 alleles). The elderly data were compared to those of the Hungarian adulthood RA (11th IHWS).

No association was found with the HLA class I antigens. The frequency of DR4 was significantly higher in EORA (30.8 vs 6.8%, OR = 2.8) but no significant difference was found in PMR (16 vs 6.8%, OR = 1.2) vs the aged matched healthy controls. DR1 proved to be significantly increased in both EORA and PMR (26.9 vs 5.4%, OR = 3.1 and 36 vs 5.4%, OR = 4.6, respectively). 62% of the EORA and 52% of the PMR patients coded the RA shared epitope (QK/RRAA). All the DRB1*01+ elderly patients, whereas 88% of the DRB1*04+ EORA and 75% of the DRB1*04+ PMR carried the QK/RRAA motif.

DR4 and DR1 seems to be associated with EORA, whereas only DR1 association could be found in PMR. When comparing the results to the adulthood RA DR1 seems to be relevant in the development of the elderly forms (EORA or PMR). In all the DR1+ elderly patients DNA typing proved those genotypes that expressed the RA shared epitope.

T-012 ANTINEUTROPHIL CYTOPLASMIC ANTIBODIES IN RHEUMATOID AND PSORIATIC ARTHRITIS

Reyhan Çeliker, Pinar Borman, Levent Özçakar, Ayşen Karaduman[1], Dürdal Us[2], Gülşen Hasçelik[2]. *Dept. of Physical Medicine and Rehabilitation, Dept. of Dermatology; [1]Dept. of Microbiology; [2]Hacettepe University, School of Medicine, Ankara, Turkey*

Antibodies to neutrophil cytoplasmic antigens (ANCA) have been described as sensitive and specific markers for systemic vasculitis and crescentric glomerulonephritis. By indirect immunofluorescence on ethanol-fixed neutrophils, at least two types of ANCA can be distinguished: one showing a characteristic cytoplasmic fluorescence patern (c-ANCA) and another showing a perinuclear to nuclear pattern (p-ANCA). The objective of this study was to determine the prevalence of ANCA in rheumatoid arthritis (RA) and psoriatic arthritis (PsA) and to evaluate the relation with disease duration and activity.

The clinical and laboratory disease activity parameters including erythrocyte sedimentation rate, C-reactive protein, rheumatoid factor, grip strength, Ritchie articular index and health assessment questionnaire were evaluated. Sera from 20 patients with RA, 8 patients with PsA and 19 patients with osteoarthritis (OA) were studied for the presence of ANCA by indirect immunofluorescence (IIF) on ethanol-fixed granulocytes. The mean age was 46.6 ± 17.2 years in PsA, 48.4 ± 11.9 years in RA and 44.0 ± 7.5 years in OA groups.

None of the OA patients had positive IIF staining for ANCA. Among the 20 sera from RA patients 12 gave negative stains and 8 (%40) positive stains (mostly p-ANCA). There were 4 negative and 4 (%50) positive stains in the PsA group. Compared with ANCA negative patients, ANCA positive patients did not have more inflammatory activity as measured by laboratory and clinical parameters both in RA and PsA patients.

In conclusion we could not show an association of ANCA positivity with any clinical manifestation and laboratory finding in RA and PsA patients but the prevalance of ANCA positivity was significantly higher in inflammatory arthritis than in the OA patients.

T-013 STUDY OF PROLACTIN LEVEL IN PATIENTS WITH RHEUMATOID ARTHRITIS

N.F. Soroka, N.P. Mitkovskaya, Akira B. Miura, Y.M. Dosin, A.M. Boris. *Minsk Medical Institute, Republic of Belarus; Akita University Medical School, Japan*

In our investigation we studied prolactin values in blood serum in patients with rheumatoid arthritis (RA) in the course of continuous period of diseases and long-term use of basic therapy as well as this therapy either due to its in inefficiency or presense of allergic reactions.

37 patients with RA were observed, for whose diagnosing ARA criteria were used, in which 8 patients with RA had systemic manifestations without marked hemodynamic dysturbunces as well as a group of donors (22 patients). Among the examined patients (30 female and 7 male) prevaled those who sell ill at the young age. All the patients had III clinical-laboratory degree of activity and before the investigation had taken nonsteroid preparations and basic therapy during several month or years. Patients taking glucocorticoids were excluded from the study.

Prolactin level was lower in patients compared to the control group ($p < 0.05$), but this difference is reliable only when the data of the overal group of patients with RA are compared to those all the control group. A reliable difference of prolactin level in the group of male patients of mature age (41–65 years of age) has been ascertained compared to the data of control group of the same age and sex. While investigating prolactin bioactivity we determined a high degree of distinctions with the control group in patients of all subgroups, formed according to sex and age ($p < 0.01$–0.001).

The obtained results testify to the prolactin level decrease in patients with RA. The highest level of serous prolactin has been established in young females (14–30 years of age). One can register dependance of prolactin bioactivity level has been determined in males in general and in males suffering from RA in particular as compared to female groups.

T-014 PROGNOSTIC VALUE OF ANTIGEN DR4 ASSESSMENT IN EARLY RHEUMATOID ARTHRITIS

Rafic Baddoura, Hassane Awada, Jad Okais, Fadi Ghandour, Souha Haddad, Samira Klaymé, Issam Mansour, Roger Naaman[1], Dominique Charron[2].
[1]Hotel-Dieu Hospital, Beirut, Lebanon; [2]Saint-Louis Hospital, Paris, France

Backgroud: Among definite rheumatoid arthritis, severity has been reported to be associated with DR4 antigen. The aim of our study is to assess the prognostic value of DR4 in early rheumatoid arthritis.

Material and Methods: All cases have less than one-year duration since symptoms onset and fulfill ACR criteria. Were excluded subjects with abnormalities on any of the following studies: Chest X-Ray, antinuclear antibodies and urinalysis. DR4+ and DR4– cases were compared regarding *mean Larsen scores, percentages of subjects with a Larsen score above the 75TH percentile and mean differences in Larsen score* since inclusion.

Results: 52 patients were included. Two have developed within follow-up clinical manifestations of systemic disease, lupus and Wegener's granulomatosis. The remaining 50 subject have an average age of 45 years (SD: 15), [minimum 15, maximum 81] and 44 are women. At inclusion le *mean Larsen score is* 18.5 (DS: 15.7). At six months it increased up to 21.7 (SD: 12.5). Only 40 were finally tested for DR4. Frequency of DRB1*04 is 50%, mostly DRB1*0404 (44%). 15.0% are homozygous. There was no evidence of a statistically significant association between clinical and biological criteria of severity and DR4. At six months *mean Larsen scores* were not significantly different among DR4+ (20.5, DS: 14.2) and DR4– (26.4, DS: 10.7) groups. Similarly, *percentages of subjects with a Larsen score above the 75TH percentile and mean differences in Larsen score since inclusion* were not significantly different among DR4 groups.

Conclusion: In early rheumatoid arthritis, *DR4 antigen does not seem to predict mean Larsen score at six month of follow-up.* However since number of subjects and mean score change are small, results may not be conclusive.

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