

HLA ANTIGENS IN HUNGARIAN PATIENTS WITH PSORIATIC ARTHRITIS

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Objective. To identify frequencies of HLA antigens in Hungarian patients with psoriatic arthritis. To determine HLA markers for the development of different clinical pattern of the disease and skin disorder.

Materials and methods. 100 unrelated patients suffered from PA were studied. The patients were classified according to the criteria proposed by Gladman.

HLA typing for both class I and class II antigens were performed by serologic techniques, using the microcytotoxicity assay.

Results. The total group showed a significant increase in frequency of HLA-Cw6, B27, B16 and its splits B38 and B39. No association between DQand/or DR antigens and PA were demonstrated. The comparisons between the clinical subgroups and normal controls revealed a significant association of B27 with spondylitis (with or without peripheral involvement).

Conclusion. PA is associated in Hungarian population with HLA-Cw6, HLA-B27, HLA-B16 (B38, B39). These association are independent from one another!

THE FOLLOW-UP OF THE DEVELOPMENT OF ARTICULAR DAMAGE IN PSORIATIC ARTHRITIS

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Objective. The aim of this study is to follow the course of articular damage over time in dependence on various characteristics of the disease. In this lecture (poster) we present the characteristics of the study group.

Methods. 100 patients with PsA were recruited for this study, using the diagnostic criteria of Moll and Wright. A standard protocol is used for the evaluation of the patients, which comprises, among others assessment of the number of clinically damaged joints and the number of radiologically damaged joints. The X-rays are evaluated according to Larsen method modified by Rau and Herborn, further modified for the use in PsA.

Results. One hundred patients were evaluated, 44 males and 56 females (male: female ratio 1: 1,3). In the subgroup with axial involvement there was male preponderance (male: female ratio 0,6: 1) The mean age of the patients at the time of entry visit was 60± 12 y.

In the majority of patients manifestation of skin disease preceded manifestation of arthritis (70%). Mean interval between manifestation of both syndromes is 16± 11 y. Both syndromes manifested simultaneously (within one year) in 21% of patients. Onset of arthritis preceded onset of skin disease in 9 patients, the mean interval being 7± 7 years. 21% of patients have axial disease- AD. 16 patients have predominant DIP involvement, 30 patients oligoarticular-OLI and 33 polyarticular involvement. Only 2 patients have mutilating involvement. Mean duration of the disease is 8,5 ± 8 years. The longest duration is in the AD (14± 11 y.), the shortest duration being in the OLI subgroup (5± 4 y.). The disease duration in DIP and POLY subgroup is nearly the same (8± 7 y.). The occurrence of clinical and radiological damage in various subgroups and its rate of progression is shown in the next table:

	NCDJ (0-62)	NRDJ (0-60)	RPCDJ 0-62	RPRDJ 0-60
All	1,4± 3,2	5,8± 7,5	0,2± 0,4	1,3± 2,4
AD	2,6± 5,8	9,0± 9,4	0,2± 0,4	1,5± 2,7
DIP	0,5± 1,6	3,7± 3,4	0,2± 0,4	0,8± 1,0
OLI	0,2± 0,6	0,9± 1,2	0,05± 0,15	0,5± 1,5
POLY	1,9± 2,6	9,1± 8,5	0,3± 0,5	2,2± 2,9

Legend: NCDJ: number of clinically damaged joints. NRDJ: number of radiologically damaged joints. RPCDJ: rate of progression of clinically damaged joints (No. of joints/y). RPRDJ: rate of progression of radiologically damaged joints (No. of joints/y)

Conclusions: Of the five subgroups of PsA defined by Moll and Wright only four could be clearly distinguished: AD, DIP, OLI and POLY. The number of joints with arthritis mutilans is too small to constitute particular subgroup. The two patients with this type of involvement could be included into polyarticular subgroup. The most severe involvement in nearly all parameters is in the AD and POLY subgroup. Belonging to one of these subgroups could pose an unfavorable prognostic factor.

Our experience in the treatment of psoriasis and psoriatic arthritis with CyA.

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Cyclosporin (CyA) treats numerous immunologic abnormalities associated with psoriasis and psoriatic arthritis (PsA), bringing about improvement in both psoriasis and the arthritic syndrome. The aim of our clinical study was to evaluate the therapeutical effectiveness of the Consupren Galena preparation and to test its safety and the dosage scheme in PsA. The preparation was administered to 19 patients with extensive, generalised findings of psoriasis at an initial dose of 5 mg/kg/day for a period of 18 months. After two weeks of treatment, the mean PASI score, expressing the severity of psoriasis, was reduced in 65.6 percent. Further gradual improvement was observed during 10 weeks and the dose of CyA was gradually decreased to 3.26 mg/kg/day. The results of the present study have proved that this average daily dose is optimal for long-term application. It has proved to be the lowest effective daily dose capable of ameliorating the arthritic syndrome. A more significant effect on inflammatory joint activity was, however, observed after 18 weeks of CyA treatment, although improvement was found in 16.6 percent of cases after 2 weeks of treatment. Complete remission of the disease has been experienced by four patients with PsA presented in case reports. 4 patients withdrew from the study before its completion (2 patients because of dyspeptic disorders, 1 patient because of hypertrichosis and 1 patient because of hypertension).

SAPHO SYNDROME

BONE MANIFESTATIONS FAR AWAY FROM THE JOINTS IN PSORIATIC ARTHRITIS

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Bone manifestations far away from the joints in psoriatic arthritis often cause difficulties in differential diagnosis. More than 50 synonyms of SAPHO (= Synovitis + Acne + Pustulosis + Hyperostosis + Osteitis) introduced by Chamot in 1987, are known. The syndrome consisting of chronic recurrent multifocal osteomyelitis and/or arthritis and/or sterile osteitis and cutaneous manifestations (acne, psoriasis) is most often diagnosed in children and in young or middle aged adults. Because of the often associated sacroiliitis, cutaneous manifestations seronegativity and arthritis, more and more publications suggest that SAPHO syndrome can belong to the seronegative spondylarthropathies. The history and characteristics of SAPHO syndrome is described, based on data from the literature, then their three own cases are presented, each of which shows the diagnostic criteria of both psoriatic arthritis and SAPHO syndrome, as recommended by Behnamou in 1985. Practical aspects of the connection between psoriatic arthritis and SAPHO syndrome are discussed in the case report.

Aortic involvement in ankylosing spondylitis.

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In ankylosing spondylitis (AS) the occurrence of involvement of ascending aorta and aortic (and sometimes mitral) valve is known. The microscopic changes include inflammatory destruction of aortic and valvular tissue and replacement by granulation and fibrous tissue. Aortic regurgitation results from thickening and displacement of valve cusps and dilatation of aortic root. It may be clinically silent or may cause severe problems to the patient. Immunosuppressive therapy may prevent or delay the need for aortic valve replacement but many times valve replacement is the only life-saving therapy.

Recently we had an opportunity to treat 3 patients with AS and aortic incompetence. All three were suffering from AS with peripheral arthritis. In one patient aortic failure was complicated with bacterial endocarditis although previous symptoms of aortic failure were only subclinical. In the second patient aortic insufficiency proceeded very rapidly to severe and life-threatening cardiac failure. In both of them aortic valve replacement was successful. Interestingly, in the second patient massive immunosuppressive therapy prior to cardiosurgery led to a significant improvement of cardiac failure. The third patient has not been suffering from any cardiac troubles but the clinical and x-ray examination (aortography) revealed a significant aortic regurgitation.

It is a matter of interest that the second patient had some features of Marfan's syndrome and the third had some features of Ehlers-Danlos syndrome. It raised the question which of these two components – inflammation or primary defect of collagen or both of them- participates in the aortic involvement.

Correlations among the protein ylk40, the clinical parameters and the disease activity rates on patients with ankylosing spondylitis.

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Twenty-four patients both males and females with Ankylosing Spondylitis according to the modified New York criteria have been studied. The group consisted of 13 men aged between 16 and 38 years (mean age 29 years) and 11 women aged between 21 and 64 years (mean age 38.9 years). The mean disease duration was 11.7 years. The modified Schober's test was employed in order to rate the spinal movement (mean 3 cm); the disease activity was assessed by the VES, PCR as well as the protein YLK-40 measurements. The OC, BAP, PICP and NTX among the markers of bone turnover were studied. The statistical finding was achieved through the simple, the multiple and the Backward Stepwise multiple regression methods. A statistically significant correlations ($r^2 = 0.56$, $p = 0.04$) come out, being the protein YLK40 employed against the clinical parameters as a whole and the disease activity parameters. As above mentioned, the Backward Stepwise was employed in order to consider every single independent variable (VES, PCR, B27, Sacroileitis, disease duration, age, sex) statistical impact on the protein YLK40 (dependent variable) in the multiple regression model the PCR (step 6) seemingly has the mayor statistical impact ($r^2 = 0.36 - p = 0.002$). The preliminary data seem to be a proof that the protein YLK40 dosage has great importance as a clinical monitoring marker of seronegative Polyarthritis as well.

CONTRIBUTION OF NEW GONIOMETRIC METHOD TO ASSESSING SPINAL MOTION IN PATIENTS WITH ANKYLOSING SPONDYLITIS.

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Limitation of spinal mobility is a cardinal feature in ankylosing spondylitis (AS). The purpose of this study was to compare various measurement methods of spinal motion and to find out the significance of clinical and laboratory parameters (e.g. acute phase reactants), which influence a reduction in lumbosacral spine movement in patients suffering from AS.

We studied 171 patients. In II. stage were 19 patients, in III. 15, in IV. 55, and in V. stage were 82 patients and 70 healthy control persons. Range of motion in the lumbosacral spine was measured by two non-invasive methods: tape measure and triaxial isoinertial dynamometry using Isostation B-200 equipment. The data from these methods were compared using the t-test and correlated using Spearman correlation analysis. The significance of selected clinical and laboratory parameters on range of motion was evaluated using multiple regression analysis.

The results showed excellent correlation between objectively measured spinal motion in all three planes with semiquantitative measurements ($r = 0,335 - 0,746$). High statistical significant differences in range of motion between AS and controls were found in all three planes of motion. The range of motion progressively reduced with increased X-ray stage (ANOVA $F = 8,88 - 50,82$) and was in relationship with clinical and biochemical parameters.

We concluded that there is a correlation between measurements by semiobjective and goniometric methods. Patients with AS have lower range of motion in lumbosacral spine including rotation. Movements in all planes were progressively restricted with increased X-ray changes. There is a good correlation with age, pain, acute phase reactants, HLA B27 and disease duration.

Sonographic (HRUS) and MR analysis of morphologic changes in patients with spondylarthropathies

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The aim was to evaluate morphologic changes in hands and feet in patients with seronegative spondylarthropathies (psoriatic arthritis - PSA and ankylosing spondylitis - AS).

On the basis of a detailed clinical and laboratory examination the diagnosis of seronegative spondylarthropathy (PSA according to criteria of Veale and in AS according to New York criteria) was established. For the ultrasound examination ATL HDI 3000 with 13 MHz array transducer was used. For nuclear magnetic resonance (MRI) Sigma+1.5 Tesla GE Medical Systems was used. Using both algorithms effusion and/or synovitis of wrist, metacarpophalangeal and proximal interphalangeal joints in hands, and inflammation of Achilles tendon, retrocalcaneal bursa and planar fascia in feet were sought.

Total 40 patients (20 cases in each subgroup) were examined. The most frequent findings in AS were: 1. tendinitis of Achilles tendon 2. retrocalcaneal bursitis, 3. plantar fasciitis 4. calcaneal erosions. The most typical findings of PSA are sausage digiti which are due to synovitis in small joints, tenosynovitis and subcutaneous tissue edema. All these components can be proven by ultrasound.

ANKYLOSING SPONDYLITIS CONNECTED WITH HLA-B27 IN ETHNICALLY DIFFERENT POPULATIONS

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Aim: Study of relations between prevalence of ankylosing spondylitis (AS) and HLA-B27 in genotypically different ethnic groups of Russia and interpolation of the obtained results on other populations.

Methods: AS and HLA-B27 prevalence was studied by cross-sectional method in several genotypically different ethnic groups residing in different climatic-geographic regions of Russia within period of 1989 to 1997. In 1989-1993 native Chukotka populations were studied (Chukchas and Eskimos related to Northern mongoloids); 832 subjects older than 14. From 1993 to 1997 some ugro-finnish populations were examined (Erzia, Moksha and Mari); on the whole 1312 subjects related to Caucasians with small mongoloid part.

Results: It was found that among Eskimos AS prevalence was 2.0% and B27 - 39.7%, among Chukchas - 0.8 and 29.6%, among metises (Eskimos-Russians, Chukchas-Russians) - 0.5 and 29.4%, among Erzia - 0.5 and 17.0%, among Moksha - 0.5 and 15.4% and among Mari - 0.2 and 21.6% correspondingly. Reliability of connection between AS and HLA-B27 prevalence in ethnic groups was found by Pierson coefficient of correlation. Results demonstrated that $r=0.82\pm 0.28$ ($p<0.047$). Correspondingly this relation could be described by the equation of simple linear regression: $y=b^0+b^1x$ (y -disease prevalence, b^0 -constant regression, b^1 -regression coefficient, x -in this case the prevalence of antigen HLA-B27). After determination of necessary constants the equation looked as: $AC(\%)=0.69+0.06x$ (mistakes $b^0=\pm 0.48$; $b^1=\pm 0.03$). Additional checking of equation on other populations demonstrated that its determination was correct (under $r=0.87$, $p<0.02$).

Thus, it was established that AC correlation with HLA-B27 in the majority of ethnic groups and populations of the world is rather stable (Correlation coefficient $r=0.87$) and could satisfactorily be described by simple linear regression equation. At the same time it should be noted that this correlation in separate ethnic groups does not work which could point at the genetic heterogeneity of this disease.

CLINICAL SIGNIFICANCE OF BROAD-RANGE BACTERIAL PCR IN THE DIAGNOSIS OF JOINT INFECTION

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Objective: To evaluate the value of bacterial polymerase chain reaction (PCR) in the diagnosis of joint infection.

Methods: Synovial fluid (SF) samples from 133 patients representing different arthritic diseases were analyzed. All samples were taken with the purpose of normal bacterial culture and were retrospectively used for bacterial PCR. After bacterial culture the samples were stored at +4°C for not more than 2 weeks before use in PCR. Clinical diagnosis of the patients that were culture and / or bacterial PCR positive, was confirmed afterwards.

Results: In 17 of the 135 SF samples the bacterial culture was positive. The clinical diagnosis of these culture positive patients was purulent arthritis in 9 cases, bacterial culture contamination in one case, whereas in the remaining 7 cases the diagnosis was not obtained due to insufficient information.

Bacterial PCR was positive in 10 of the bacterial culture positive samples and in addition in 8 culture negative samples. The clinical diagnosis of these culture negative and PCR positive patients was in 3 cases possible purulent arthritis, in one case reactive arthritis and in the remaining 4 cases bacterial contamination.

Bacterial PCR was negative in 7 culture positive samples. The clinical diagnosis of these bacterial culture positive and PCR negative patients was in 3 cases purulent arthritis, in 3 cases it was unknown and in 1 case bacterial contamination.

Conclusion: These results suggest that in few cases bacterial PCR may give some advantage over bacterial culture in the diagnosis of joint infection. However, since the number of culture and / or bacterial PCR positive samples in our study was low, these results must be regarded as very preliminary.

INVESTIGATION ON POSTRESPIRATORY REACTIVE ARTHRITIS

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Objective: To investigate etiology, clinical and laboratory characteristics and early prognosis of reactive arthritis after respiratory infections.

Material and methods: 67 patients with early ReA in young age (17 - 45 years), out of them 31 after acute respiratory infections (PR-ReA), 14 after urogenital (UG-ReA), 7 after eutero-colic (EC-ReA) and 15 after unidentified infections, were an object of a clinical investigation and treatment and ambulatory follow-up till the end of third month.

Results: As etiologic agents in PR-ReA streptococcus, chl. pneumoniae, herpes simplex I virus, coronavirus and reovirus were identified. From HLA-antigens significant association of PR-ReA was found out only with B40, whereas UG-ReA and EC-ReA correlated with B27. The peripheral-joint syndrome and laboratory parameters were approximately equal in all kinds of ReA, however the vertebral and periarticular changes and Reiter syndrome were rarer in PR-ReA (although without statistical significance). With the disease evolution the subjective symptoms improved more quickly in the patients with PR-ReA, torpid cases were less frequent again in PR-ReA, but without significance.

Discussion: Up to now an association between PR-ReA and HLA-B40 has not been described in literature.

Conclusion: ReA after acute respiratory infection is distinguished from other kinds ReA not only etiologically, but also genetically and shows more favourable evolution.

Increased occurrence of impaired glucose tolerance and dislipidemia in patients with diffuse idiopathic skeletal hyperostosis.

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Diffuse idiopathic skeletal hyperostosis (DISH) is a bone and cartilage diseases with common metabolic disorder. The etiology is presently unknown. Previous studies showed significant association between diabetes mellitus and DISH.

Methods: In the present study we compared patients with DISH without diabetes ($n=33$) and age and weight matched controls ($n=13$). Both groups were subjected to oral glucose tolerance test (OGTT) and insulin, C-peptide, IGF-I, IGF-I binding protein 3 (IGFBP-3), growth hormone (GH) were assayed by radioimmunoassay. Lipid metabolism was characterised by determination of serum cholesterol (total and HDL cholesterol), triglycerides, apo A1, apo B, α , pre β , β lipoproteins and Lp(a) lipoprotein. The level of uric acid was also determined.

Results: 32% of the DISH patients showed significant signs of impaired glucose tolerance (IGTT), while the IGTT was present only in 7.6% of controls. In accordance with above a tendency to higher glucose level at 120 min. of OGTT test was found in DISH patients (6.7 ± 0.4 vs 5.4 ± 0.6 mmol/l, $p<0.06$). There were no differences in C-peptide, IGF-I and IFGBP-3 and GH serum levels. On the other hand, DISH patients had significantly higher triglyceride levels (1.3 ± 0.1 vs 2.0 ± 0.1 mmol/l, $p<0.05$) and pre β lipoproteins but lower level of α lipoproteins. Uric acid was also increased in DISH patients $p<0.05$.

Conclusion: Our results confirm a significant association between DISH and glucose and lipid metabolism abnormalities.

PREVALENCE OF RHEUMATIC DISORDERS IN AGED POPULATION OF BELGRADE

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Introduction Prolonged life expectancy in recent decades resulted in increased aged population resulting in higher prevalence of a number of diseases. **Objective:** To estimate the prevalence of rheumatic disorders in aged population (above 60) of Belgrade. **Methodology and sample:** Randomly selected sample of urban population of Belgrade. The questionnaire filled in by participants, asked for a variety of information: demographic characteristics, data on prior working conditions, data about personal and family histories on rheumatic and some other diseases. Positive answers about pain, swelling or stiffness of peripheral joints during preceding three months was separated as a group with rheumatic complaint for clinical examination. **Results:** Sample of 2781 persons were interviewed and 448 (16.1%) was over 60 years of age, 217 (48.4%) males and 231 females. 213 of 448 (47.5%) were with rheumatic complains: 84 (38.7%) males and 129 (55.8%) females. 166 (77.9%) has been examined and prevalence of all rheumatic disorders was 19.8% for males and 35.9% for females. Prevalence of some specific disorders was for males: osteoarthritis 11.98%, cervical and low back pain 4.6%, extraarticular rheumatism 3.23% and for females: nondifferentiated polyarthritis 0.43%, osteoarthritis 25.1%, extraarticular rheumatism 4.33%, cervical and low back pain 3.89%, and other disorders 1.73%. **Conclusion:** High prevalence of rheumatic disorders in aged population suggests the necessity for specific education of rheumatologists and public health organization in gerontology.

THE EPIDEMIOLOGY OF VERTEBRAL DEFORMITY IN A HUNGARIAN POPULATION

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Our aim was to determine the prevalence, type and level of radiographically defined vertebral deformity in Hungarian males and females. The cross-sectional, population-based survey was conducted in the frame of the European Vertebral Osteoporosis Study, which comprises 19 countries and 36 centres.

A random sample of 324 females and 300 males aged 50 years and over stratified in 5-year age bands was recruited from the district Oldbuda of Budapest. Each age-band represented at least 50 people. Lateral thoracic and lumbar spine radiographs were taken according to a standard protocol. The films were centered at vertebra T7 and L2. Using a translucent digitizer and cursor, six points were marked for anterior, middle and posterior heights on each vertebral body from T4 to L4. For defining vertebral deformity the method described by McCloskey and Kanis was used.

Based on the McCloskey-Kanis criteria the prevalence of all deformities was 16,7% in females and 18,7% in males.

Extrapolating the results we can conclude that vertebral deformity found in both sexes similarly, affects approximately 500.000 individuals out of 10 million inhabitants of Hungary along with the potential deterioration of quality of life.

ATYPICAL SERO-NEGATIVE POLYARTHRITIS AND MONOCLONAL GAMMAPATHY (MULTIPLE MYELOMA): CHANCE ASSOCIATION OR PATHOLOGICAL LINKS?

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Rheumatic manifestations (sero-negative polyarthritis, cutaneous vasculitis, Sjogren Syndrome, LES) may accompany or precede, even several years, the insurgence of hematological disorders, SMD MM and other, in about 10% of the cases.

We report the case of 60 year old woman who had been treated for ten years, with low doses of steroids (5 mg/die prednisolone) for chronic sero-negative polyarthritis. Five years ago, following a sero-protein electrophoresis examination there appeared an IgAk monoclonal gammopathy, which was, at the time diagnosed as MGUS.

The situation remained unchanged until september 1998 when there was an exacerbation of the rheumatic pathology with a notable increase of inflammation for which the patient was treated with steroids (1 mg/Kg/die) + methotrexate (7.5 mg/week) but no effect.

In the meantime the patient suffered severe asthenia, progressive anemia, an increase in the IgAk peak and osteolytic cranial lesions. Following a bone marrow biopsy, the patient was diagnosed as having multiple myeloma IgAk.

The association of rheumatic manifestations and multiple myeloma is a quite rare occurrence even if in the literature there are reported some cases of rheumatic symptomatology as an early sign of haematological diseases. In our case, it may be affirmed that the rheumatic symptomatology resistant to the steroid treatment, may be linked to a local precipitation of fragments of monoclonal components IgAk in the synovial membrane. It may therefore be Hypotesised that the prolonged steroid treatment in some way, delayed the insurgence of the multiple myeloma.

OSTEOGENESIS IMPERFECTA IN 7 YEARS OLD GIRL

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Severe osteogenesis imperfecta (OI) is a disorder characterized by osteopenia, frequent fractures, progressive deformity, loss of mobility and chronic bone pain. In Slovakia, this condition is a rare one.

The authors present a case report of a 7 years old girl born from second pregnancy with birth height 53 cm and weight 4980 g in which since 11th month of her age 14 fractures with deformities of long bones have occurred. The girl of little stature has macrocranium, gray-blue eyes, triangular face, kyphoscoliosis and dentinogenesis imperfecta (Sillence type IV B of OI). Densitometry as well as radiographs have revealed severe diffuse osteoporosis.

Because of a progressive course of the disorder with bone pain and severe osteoporosis therapy with pamidronate was started first time in a child in Slovakia.

COMPARISON STUDY OF AMERICAN AND POLISH NORMAL REFERENCE PARAMETERS OF QUS

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Our experience showed (1) that diagnostic usefulness of DEXA method depends on standardisation on healthy reference group of population in which machine is used. The same need may concern also quantitative ultrasound (QUS) method. To check this hypothesis we compare manufacturer's of SAHARA Hologic reference normal values of QUS parameters of American origin with that of Białystok region female population ones.

Sample and the methods. The study has been conducted in 1132 randomised women represented general healthy female population of Białystok region (PL) with the use of Hologic Sahara QUS machine. In six decades of life from 20-30 to over 70 including from 61 to 282 persons in each group we compared and analysed Quantitative Ultrasound Index (QUI), Estimated Heel BMD (BMD), Broadband Ultrasound Attenuation (BUA) and Speed of Sound (SOS) with manufacturer's ones representing American (US) female health population at the same decades of life. The results are as follows:

Age	N	BMD			QUI			BUA			SOS		
		PL	US	%	PL	US	%	PL	US	%	PL	US	%
20-30	61	0,553	0,581	-5,1	99,5	103,9	-4,4	80,16	76,71	4,3	1552	1569	-1,1
31-40	86	0,563	0,555	1,4	101,1	99,88	1,2	80,13	74,82	6,6	1559	1561	-0,1
41-50	222	0,529	0,562	-6,2	95,9	100,8	-5,2	78,03	75,89	2,7	1547	1562	-1,0
51-60	234	0,506	0,545	-7,7	92,0	98,19	-6,7	76,44	74,13	3,0	1541	1558	-1,1
61-70	282	0,444	0,471	-6,1	82,4	86,53	-5,0	64,49	65,02	-0,8	1528	1538	-0,7
>71	247	0,412	0,436	-5,9	77,2	80,98	-4,9	59,83	59,81	0,0	1521	1530	-0,6

In contrary to BUA, we found in BMD and QUI lower values in Białystok population ranking from minus 5,1% to 7,7% and from plus 1,2% in fourth decade to minus 6,7% in sixth decade respectively. Pick bone mass (PBM), which decides on T-scores, is 3,2% lower in polish reference group and is reached in fourth decade while American compared group reached PBM earlier in third decade of life. **Conclusion:** Sahara Hologic machines need to be adjusted to local references data.

Ref.:1. Nowak N., et co.: Białystok Osteoporosis Study (BOS):1. Evaluation of bone mass and risk factors in female population. 3dr CECC, Bratislava,2000.

BIALYSTOK OSTEOPOROSIS STUDY (BOS): 1. EVALUATION OF BONE MASS AND RISK FACTORS IN FEMALE POPULATION.

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Objective of BOS is to assess the prevalence of factors that may influence negatively the bone mass (BMD) being recognised as a risk of osteoporosis (OP). **Sample** of 1100 women over 45 of age represented female population of Białystok City and surrounding communities based on random selection proportionally to age sections in definite age group was elaborated in Province Computer DataBase and is consistent with the rules of epidemiological study (95% CV). **Methods.** The study included BMD measurements of hip and lumbar spine by DEXA with Hologic QDR4500SL and filling of a questionnaire in attendance of doctor. The questionnaire contains questions on diet, physical activity and style of life, procreation status from menarche to menopause, smoking habits, incidence of maternal and passed bone fractures as well as past history of diseases. Osteoporosis, osteopenia and normal values were defined according to WHO criteria. **Results:** Up to now 504 examinations are completed. In the group of 504 women, we have found 120 (23,8%) at mean age of 63,8 with T-score >-2,5 ("osteoporosis"), 220 (43,6%) at mean age of 61,5 with T-score between -1,0 and -2,5 ("osteopenia") and only 164 (32,6%) at the age of 54,5 with "normal" T-score between +1,0 and -1,0. Working results are shown in table below.

RISK FACTOR	NORM	OSTEO-PENIA	OSTEO-POROSIS	P
Fractures history	13%	22%	38%	P<0,001
Recent fractures in mothers	10,5%	9,5%	15%	P<0,001
Early menopause <45 years of old	10%	17%	21%	P<0,001
Periods of undernutrition during growth	14%	25%	25%	P<0,005
Incidence of coronary heart disease	18%	25%	32%	P<0,002
Coffee intake	34%	25%	18%	P<0,001

There is no statistical significant (SS) correlation between milk intake, smoking habits and bone mass. Average calcium intake from diet in studied sample was 380 mg per day. We found SS correlation between low BMD and incidence of passed fractures, early menopause, concomitant coronary heart disease, recent fractures in mothers, and incidence of malnutrition during growth. **Working conclusion:** Such high percent of "osteoporosis" and "osteopenia" and low percent of "normal" values of BMD among general female population needs to be evaluated again after establishing polish reference normal value of BMD using DEXA machines.

BONE MINERAL DENSITY IN SELECTED RHEUMATIC DISEASES

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Bone mineral density (BMD) in patients with different inflammatory rheumatic diseases in comparison with primary osteoporosis (OP) was less often assessed.

Material and methods: BMD of the lumbar spine (L2-4) and femoral neck (FN) was measured by DXA densitometer NORLAND XR-26 in a group of 316 patients (276 women and 40 men) with 9 different inflammatory diseases (RA, JCA, SLE, SD, MCTD, AS, PA, PM, Sjogren's syndrome). The results were compared with the reference values of the device (Z-score) and with the results of the EPOS (European Prospective Osteoporosis Study) Slovak Centre control group comprising 367 probands using WHO diagnostic criteria for osteoporosis (T-score).

Results: In all the group, the average value of Z-score was significantly decreased in L2-4 (Z: -0,90) as well as in FN (Z: -0,95) areas. The lowest average score was observed in AS patients.

In patients aged over 35 years, significantly higher (p<0,05) incidence of OP was found in men (L2-4: 53,3%, FN: 34,5%) compared to women (38,7% resp. 25,7%). In patients over 50 years, incidence of OP was almost 50% in L2-4 and 35% in FN areas. In the group of postmenopausal patients, OP was found in L2-4 in as much as 46% and in FN area in 28% females compared to EPOS control group, while normal BMD values in L2-4 were observed only in 15% and in FN in 17,4% females. Subanalysis according to different diseases was performed.

Conclusion: In all the group, the average value of Z-score was almost by 1 SD lower in both measured areas compared to the reference population value Z=0, the most pronounced in patients with AS, RA and SD. Significantly lower values of BMD were found both in women and men compared to EPOS control group.

Relationship of serum sex steroid levels and bone mineral density in male idiopathic osteoporosis.

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Recently more data suggest an important role of sexual hormones in the pathomechanism of bone metabolism.

The aim of our study was: 1/ To determine how the level of estradiol (E), testosterone (T) and dehydroepiandrosterone (DHEAS) changed in male idiopathic osteoporosis compared to control group 2/ What is the relation between the bone mineral density and the levels of sex steroids.

Patients: Selection criteria excluded all the acute or chronic illnesses, disorders or medications associated with alterations in bone or mineral metabolisms (for example: glucocorticoid therapy, alcoholism or hypogonadism). The total number of selected patients was 130. They were divided into two groups; Group A: 75 male idiopathic osteoporotic patients (mean age 59,9±9,3 year, range 26-76) and Group B: 55 healthy men (mean age 55,3±7,6 year, range 39-69).

Methods: BMD measurement was performed by DEXA at lumbar spine and femoral neck (DPX-L, Lunar) and by SPA at forearm (NK-364, Gamma). Patients were grouped according to WHO criteria (osteoporosis below -2,5 T-score). Serum samples were assayed by RIA for total T (NR: 10,0-35,0 nmol/l) and DHEAS (NR: 2,0-10,0 umol/l). Serum estradiol was measured by MEIA microparticle immunoassay (NR: 25-70pg/ml). Mean, SD, range were used for all quantitative parameters. Paired T test, and multivariate regression were used for statistical analysis.

Results: There was no difference between Group A and B concerning the levels of serum sex hormones. Our results have not shown decrease in serum estrogens and we have not found relation between serum estrogens and BMD. Male serum testosterone level had weak negative correlation with age (r=-0,19, p=0,07) and its level has shown a positive association with radius BMD (r=0,42, p=0,016) if we corrected by age. The results of the analysis were similar in both groups (Group A: r=-0,35 p<0,1 Group B: r=-0,38 p<0,2) and were therefore presented for the group as a whole (r=-0,38 p<0,0001). It has been found only in osteoporotic group that serum DHEAS levels were significantly correlated with BMD at all sites. (DHEAS and lumbar BMD: r=0,49 p=0,008, DHEAS and femur BMD: r=0,48 p=0,009, DHEAS and radius BMD: r=0,37 p=0,01).

Summary: Our results could suggest a DHEAS related bone mass loss in male idiopathic osteoporosis. These data indicate a greater effect of testosterone mostly at cortical site. Conversely we could not demonstrate that E deficiency is a major cause of bone loss in male idiopathic osteoporosis.

QUS DOES NOT DISCRIMINATE OSTEOPENIC WOMEN WITH NORMAL FROM THAT WITH INCREASED BONE RESORPTION

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Objectives: Need of active antiresorptive treatment of osteopenic patients (T-score between -1.0 and -2.5 by DXA according to WHO criteria) depends on increased bone resorption assayed with bone markers. **The aim** of this study is to check if QUS is able to discriminate osteopenic women with normal from that with increased bone turnover. **Methods:** 120 women at the mean age of 62 diagnosed as osteopenic (T-score from -1.0 to -2.5 by DXA in lumbar spine and/or hip using QDR4500SL Hologic machine) have been examined by two QUS - Sahara, Hologic and UBIS 3000, MDS - devices as well and N-terminal telopeptide of collagen cross-links NTx by Ostex and creatinine in urine was measured. Women were divided into two subgroups according to NTx levels below 65 as with normal and over 65 nmol/mmol Cr as with increases bone resorption. Mean values of T-scores of hip by DXA, stiffness and SOS by Sahara, SOS by UBIS and NTx/Cr have been compared and statistically analyzed. **Results** are showed below:

	N	Age mean	T score of hip DXA	T Stiff mean Sahara	T SOS mean Sahara	T SOS mean UBIS	NTx/Cr (nmol/mmol)
NTx >65	27	62	-1,33	-1,11	-1,42	-2,1	87,41
NTx <65	93	62	-1,38	-0,79	-1,05	-1,78	40,8
p		0,932	0,754	0,117	0,43	0,145	0,000

In the group of women with increased bone resorption all evaluated parameters by DXA and QUS showed expected trend to pathology but these differences are statistically not significant. **Conclusion:** QUS showed tendency but does not satisfactory discriminate osteopenic women with normal from that with increased bone resorption.

IDIOPATHIC JUVENILE OSTEOPOROSIS -CASE REPORT

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Idiopathic juvenile osteoporosis is a rare pathological condition can be manifested in the beginning by different signs such are: pain in spine and extremities, walking difficulties, body deformities, etc. In this study we report a case of 10 years old girl who was send to rehabilitation programme by orthopedist. She had several body deformities: scapulae alatae, thoracolumbal scoliosis and atipic pain in her back and extremities.

Her deformities became visible at the age of 7 and after the fracture of left forearm. Her parents noticed that even after the healing of fracture she used less her left arm. Consequently hypotrophy of muscles occurred, and left arm developed slower that the right.

After the admission of our clinic we made the detailed clinical, laboratory and x-ray examination. According to the results the diagnosis of idiopathic juvenile osteoporosis was made.

EFFECT OF BIOMIN H® AND COMBINATION THERAPY WITH COLLAGEN ON THE OVARIECTOMIZED RATS.

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Objective. The effects of calcium biopreparate Biomin H® and combination therapy with collagen type I in preventing OVX-induced bone loss were studied in an animal model of postmenopausal osteoporosis. For comparison the pure calcium carbonate and collagen I alone were studied.

Methods. Adult female Wistar rats (250±5g) were subjected to bilateral ovariectomy (OVX) and sham operation (SHAM). Forty two animals were divided into six groups: (1) sham; (2) OVX controls; OVX rats treated: (3) with Biomin H® (BIO); (4) with collagen (COL); (5) with Biomin H® plus collagen (BIO+COL); and (6) with calcium carbonate (CaCO₃). The animals were on a calculated diet containing 7.5 g Ca/kg for a period of 12 weeks. Calcium treated groups had added 7.5 g of Ca/kg in the form of Biomin H® or calcium carbonate daily. Collagen treated rats received additional 0.08g of collagen/kg in their daily diet. Bone mineral density (BMD) and bone mineral content (BMC) of the whole body and femur was determined using DEXA. Pyridinoline (Pyr), deoxypyridinoline (Dpyr) and creatinine were assessed in the urine.

Results. BMD and BMC of the whole body were significantly higher in SHAM, OVX rats treated with Biomin H® and CaCO₃ in comparison with OVX untreated controls. The rats in SHAM, BIO, BIO+COL groups had significantly increased values of femur BMD and BMC versus OVX, COL and CaCO₃ groups. Both Pyr and Dpyr were significantly lower in BIO, BIO+COL groups compared to the rats in OVX and CaCO₃ groups.

Conclusion. Our data suggests that preventive treatment of ovariectomized rats with Biomin H® and combination therapy with collagen markedly inhibit loss of bone mineral density and content as well as biochemical markers of bone resorption Pyr and Dpyr in urine.

EXERCISE IN PATIENTS WITH OSTEOPOROTIC VERTEBRAL FRACTURES

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Objective: In spinal osteoporosis, prevention of further bone loss and vertebral compression fractures is very important. Osteoporotic fractures are a significant cause of morbidity and mortality and represent a major problem of health care. The most important criterion for successful treatment of established osteoporosis is reduction of the fracture rate. There is some evidence that regular exercise can reduce bone loss and improve the muscular support of the spine.

Methods: The authors present a case reports of 26 and 75 years old women with osteoporotic vertebral fractures. They tested a nonloading exercise program for back extensor and abdominal muscles and measured its effect on bone mass and muscle strength. Bone mineral density of the lumbar spine and femoral neck was measured at baseline and after one year and muscle strength was measured at baseline and every 6 months.

Results: After 1-year exercise program the strength of the back extensor and abdominal muscles was higher. Bone mineral density increased in both measured sites (lumbar spine +1,7%, resp. +7,7%, femoral neck +2,5%, resp. +11,5%). No additional fractures occurred as a result of the exercise program. **Conclusion:** Regular exercise may be useful for maintaining bone mass in patients with osteoporotic vertebral fractures and for improving the muscle support of the spine.

SPECIAL PHYSICAL TRAINING, SPECIAL DIET FOOD WITH CALCIUM AND VITAMIN D FOR THE PREVENTION OF EARLY POSTMENOPAUSAL BONE LOSS

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Background: Epidemiologic studies have shown that a special physical training, a special diet food with calcium and vitamin D, protects women against the early postmenopausal bone loss. The long-term effect is, however, not well known. The purpose of this study was to investigate the effect of three years treatment on bone density (BMD).

Methods: In the group of early postmenopausal women were followed initially BMD and controlled BMD after special physical training and special diet with calcium and vitamin D (Health Spa Piešťany).

Results: The three years effect of the special physical training, special diet with calcium and vitamin D resulted in a higher or an equally mean lumbar spine bone mineral density (BMD).

JEDNOFOTONOVÁ EMISNÍ TOMOGRAFIE V DIAGNOSTICE RENÁLNÍ OSTEOPATIE

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Scintigrafická vyšetření zastávají v diagnostice renální kostní choroby významné místo. Podávají především informace o rychlosti kostního obratu. Scintigrafie je prakticky jedinou použitelnou metodou, která je schopna poskytnout přesnější informace o metabolické aktivitě kosti v jednotlivých lokalizacích. Významné tak doplňuje informace zprostředkované biochemickými metodami. Základem scintigrafických vyšetření byl vždy statický scan s použitím difosfonátu značeného ^{99m}Tc. Před několika lety jsme začali používat dynamické kostní scintigrafie, což umožnilo semikvantitativní stanovení rychlosti kostního obratu. V současnosti se začíná používat kvantitativní hodnocení pomocí SPECT. Autoři podávají informace o prvních zkušenostech s uplatněním této vyšetřovací metody u pravidelně dialyzovaných pacientů s renální osteopatií. Podávají informace o metodice vyšetření a výsledcích u nemocných se sekundární hyperparathyreozou.

THE RELATIONSHIP BETWEEN INDIVIDUAL RADIOLOGICAL FEATURES AND DISABILITY IN HIP OSTEOARTHRITIS

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Aim of the study: the relationship between symptoms (especially pain) and radiological findings is well known in comparison with that between disability and radiological findings. The correlation between individual radiological features and disability was analyzed.

Methods: in a group of 109 patients (81 female, 28 male, mean age 59,6 years) meeting ACR criteria of hip osteoarthritis the individual radiological features according to Altman Atlas were estimated. The degree of disability was assessed with the use of Lequesne index.

Results: significant correlations between superior joint space narrowing

$p < 0,001$, axial joint space narrowing $p < 0,01$, femoral subchondral bony cysts $p < 0,01$ and Lequesne index were observed.

Conclusions: the radiological findings especially joint space narrowing and subchondral bony cysts correlate with disability. Articular cartilage damage and changes in subchondral bone are important determinant of disability in hip osteoarthritis.

LOW BACK PAIN AND OSTEOARTHRITIS IN OBESE PATIENTS

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The authors retrospectively analysed the occurrence of the low back pain and knee osteoarthritis in obese and normal body weight patients.

476 /70,9% / of 663 patients had normal body weight, and 193 /29,1% / were overweight /body mass index: 25-30 kg/m² or obese /body mass index > 30 kg/m². In the normal weight group were 23-23 patients /4,9%-4,9% / knee and hip osteoarthritis, 56 patients /11,9% / were low back pain. In the obese group were 59 patients /30,6% / knee osteoarthritis, 42 patients /21,8% / hip osteoarthritis and 112 patients /58% / low back pain. In the group of obese patients low back pain occurs the age of 18-30, osteoarthritis of hip and knee joints occur only over age 40, in men and women as well. The most frequent disorder was low back pain in both groups. While in patients with normal body weight rheumatologic disorders occurred in men over age 30 and in women over age 40, in obese patients occurred earlier.

LASER THERAPY IN THE TREATMENT OF ACUTE PHASES OF KNEE OSTEOARTHRITIS

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Osteoarthritis is a disease of a slow but progressive evolution during which inflammatory episodes may occur. The aim of recent research was to evaluate the effect of lasertherapy (LT) in the treatment of knee osteoarthritis with synovial inflammation. Our study included 20 patients (10 male and 10 female). The diagnosis of osteoarthritis was made after the clinical, radiological and ultrasound examination. All the patients were clinically tested at the beginning of the treatment and after 20 LT. The following parameters were examined: knee pain (grades 0-2), knee swelling (in cm) and range of motion of knee (in degrees). The LT was applied as a monotherapy. We used low-energy laser Irradia Mid 1500. We treated the articular points of knee with dosage of 4 J per point and extra-articular points with 2 J per point. The total dose per treatment was 30 J. During the first two weeks the patients were treated every day and next 3 weeks every second day.

After the treatment we found the statistically significant decrease of knee pain ($p < 0,05$), statistically significant reduction of knee swelling ($p < 0,05$) and statistically significant increase of range of motion ($p < 0,05$). Ultrasonography revealed the reduction of synovial inflammation, while the degenerative changes of the joint remained the same. Conclusion: reducing the production of cytokines and other mediators of inflammatory reaction such as prostaglandins and leukotrienes, LT can be a useful modality in the treatment of synovial inflammation of the knee osteoarthritis.

PHYTOESTROGENS IN COMPLEX TREATMENT OF OSTEOARTHRITIS.

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Phytoestrogens (Ph) - plant chemicals of different classes with estrogenic properties. Their positive effect in estrogen-deficient disorders was shown earlier (Alikhanov B.A. et al., 1990, 1998, 1999). The effectiveness of diet containing Ph in complex treatment of osteoarthritis (OA) is studied in open controlled randomised trial. 60 female patients at the age of 46-87 suffering from OA were under observation. All patients had signs of 2 stage gonarthrosis. 12 patients had climacteric manifestations, 21 - arterial hypertension, 26 - obesity of 1-3 stages, 13 - ischemic heart disease. The low fat and carbohydrate diet enriched with Ph-containing plants was prescribed to patients. The patients were under observation for 6 months - 2 years duration. As follows from our findings positive clinical result was achieved in most cases. Improvement in clinical and laboratory parameters and articular function has been documented. The prolongation of action of antirheumatic drugs observed.

THE TREATMENT OF THE OSTEOARTHRITIS WITH ZEEL

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The osteoarthritis represents a social problem because of its high frequency, continuous progression and a lot of drugs are inefficient and have side effects.

The goal of this study is evaluation of efficiency of Zeel (Heel, Germany) in 168 patients with osteoarthritis. Patients mean age was 65,4 ± 3,2, disease duration ranged between 2 and 10 years. The patients were divided according to radiologic stage of disease in I - 42, II - 92, III - 27, IV - 0. All patients were randomly divided into 2 groups: the first group - 82 patients that were treated with Zeel 2,0 intraarticular administered 3 times per week, the total number - 8 injections, the second group - 81 patients treated with Placebo in a similar dose and frequency, associated with Diclofenac.

The treatment was repeated after 6 and 12 months. Total and individual efficacy of the drug was analyzed according to articular syndroms, biochemical and scintigraphic parameters every 3 months. X-ray examination of the joint was made before and after treatment (12 months).

The results demonstrated that in the first group with Zeel the efficacy was better: articular syndrome improved in 85%, the nonspecific parameters of the inflammation normalised in 72% in the first 1-3 months of the treatment. The captation index of Tc⁹⁹ diminished in 78% in the first 6 months and radiologic progression stopped in 85% after 12 months of treatment. In the second group such improvements were noted in 18% patients, in 71% was noted a worsening of all parameters. Adverse reaction wasn't noted.

Zeel has chondroprotective properties, has no adverse reactions and can be used in the long term treatment of patients with osteoarthritis.

INFLUENCE OF SMOKING CIGARETTES ON OCCURRENCE OF KNEE PAIN AND RADIOGRAPHIC FEATURES OF KNEE OSTEOARTHRITIS

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Aim of the study: to assess the influence of smoking cigarettes on occurrence of knee pain and/or radiographic features of knee osteoarthritis.

Methods: we enrolled to the study 164 subjects, 82 women and 82 men, mean age 46,4 years (19-66 years), complaining of knee pain in a questionnaire study or subjects without knee pain who had abnormalities in knee joint function found on physical examination (e.g. crepitations or limited motion). The questionnaire included also questions on smoking habits. All patients had both knees radiographs anteroposterior and lateral 20 degrees flexion views. Joint space, osteophytes, subchondral sclerosis, cysts were assessed. Scoring for osteoarthritis (0-4) according to Lawrence-Kellegren scale was also done. The associations of analyzed variables were calculated as odds ratios (with 95% confidence intervals) by unconditional logistic regression adjusting for age and gender. Potential confounding by other risk factors was explored by multivariate analysis. For statistical analysis STATA 5.0 was used.

Results: We found that knee pain is more likely to occur in subjects smoking cigarettes (OR 1,7; CI 0,85-3,56), this relationship was also dose dependent because heavy smokers (over 20 cigarettes a day) had more knee pain than those who smoked less (OR 3,17; CI 0,78-12,96). Even ex-smokers had increased risk of occurrence of knee pain (OR 1,4; CI 0,57-3,28), however this correlation was stronger for current smokers (OR 2,0; CI 0,91-4,35). There was no influence of smoking on the severity of osteoarthritis measured according to Lawrence-Kellegren grade (OR 0,8; CI 0,4-1,7). Multivariate analysis considering age, gender, BMI, work character revealed that only age and gender influenced occurrence of radiographic features of knee osteoarthritis while knee pain depended only on number of cigarettes smoked per day.

Conclusion: According to our data it seems that smoking is positively associated with knee pain but it is not likely to influence the development of radiological features of osteoarthritis.

PREVALENCE OF MUSCULOSKELETAL COMPLAINTS IN UNIVERSITY STUDENTS OF PHYSICAL CULTURE

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Musculoskeletal pain is a very common complaint. Its prevalence increases with age but it is experienced also by children, adolescents and young adults.

Objective: To determine the prevalence of musculoskeletal pain in upper and lower limbs among university students of physical culture.

Material and method: The study was performed on 503 university students of physical culture, mean age 22,8 yrs (21-28 yrs), 218 women and 285 men. The subjects received a questionnaire concerning information about musculoskeletal disorders, that was responded by 95,8% of them. We assessed the life-time, one-year, one-month and point prevalence of pain localized in upper and lower limbs (i.e.: hands, wrists, elbows, shoulders, hips, knees, ankles and feet).

Results: Knee pain, shoulder pain and ankle pain were the most prevalent in our material, 39,0%, 20,5% and 18,3% respectively. The life-time prevalence of pain in other locations was as follows: wrists-10,3%, elbow-9,1%, hips-8,7%, feet-8,5%, hands-4,8%. The life-time prevalence of pain in most locations except for hip pain and knee pain was higher in males what was also true for one-year and one-month prevalence of these complaints.

Conclusions: This study shows that musculoskeletal pain is common among students. It is quite remarkable to emphasize the relatively high prevalence of knee pain and shoulder pain..

SPECIAL PROBLEMS OF REHABILITATION IN CHILDREN WITH JUVENILE IDIOPATHIC ARTHRITIS

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The treatment of children with juvenile idiopathic arthritis (JIA) is a long and difficult task. The overall aim of rehabilitative management is to assist the child in maintaining as normal a life style as possible. There may be times when disease appears inactive, but the joints and muscles are still and weak. It is essential that the child continues his/her routine exercise program and continues in using resting, corrective or dynamic splints and special orthoses.

Besides obligatory care of weight-bearing and peripheral joints the cervical spine and temporomandibular joints present a special problems of rehabilitation management. The stiff cervical spine influence the whole body mobility of the child. The restricted temporomandibular function limites the mouth opening and may lead to underdevelopment of the mandible and cause malocclusion of the upper and lower teeth.

It must be remembered that a child is not a little adult and therefore it is of immense importance to perform the exercise in a form of a game according to the age of the child.

Encouragement from the medical and paramedical team and from his relatives and friends will help enormously in his attempts to achieve a normal life of the child.

Joint hypermobility syndrome (JHS), mitral valve prolapse and bilateral total occlusion of the ulnar arteries mimicking Raynaud's phenomenon (RP) - report of 2 cases.

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The cases of two female patients (b.1969 and 1980) with JHS (Beighton score 9/9 and 8/9) are reported. JHS related features like marfanoid habitus, pectus carinatum, kyphoscolioses, arachnodaktyly, arthralgia/arthritis, back pain/headache, flat feet, skin striae, easy bruising, varicose veins, mitral valve prolapse, reduced bone mineral density (T-score: -2,3 and -1,8) and anxiety/panic were seen in these patients.

Both patients had short episodes of bilateral acrocyanosis, excited by cold exposure and emotional stress.

They underwent a complete clinical examination, laboratory investigations (including routine parameters, rheumatoid factors, antinuclear antibody, anticardiolipin antibodies, cryoglobulines, immune complexes), X-ray-, CAT-examinations, echocardiography and arteriography to detect any condition related to primary/secondary RP or malignoma. Any indicators of inflammation, inflammatory connective tissue disease, malignoma or of immunologic reactivity were absent. The only new findings in both patients were total bilateral occlusions of the ulnar arteries mimicking RP.

Both patients were successfully treated with iloprost infusions and calcium channel blockers.

We conclude that secondary RP caused by bilateral occlusion of the ulnar arteries may be a new extraarticular feature seen in the JHS.

ATRIAL FIBRILLATION TREATMENT IN PATIENTS WITH VALVULAR HEART DISEASE

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Atrial fibrillation (AF) is the most frequent and heavy complication of valvular heart disease (VHD) and the development factor of heart failure (HF) progression and sudden death.

We studied 112 pts with VHD aged from 18 to 60 years, who underwent ECG and echocardiography. AF was registered in 85 pts (constant form in 40, paroxysmal in 45), sinus rhythm (SR) - in 27 pts. The SR restoration in paroxysmal AF pts was carried out with novocainamide (1g), digoxin (0,5mg) and cordarone (600 mg), verapamil (240 mg).

SR was restored in 32 from 45 pts with paroxysmal AF (71%) and was stable within 6 months. Novocainamide treatment was effective in pts with left atrium size (LAS) from 43 to 45mm, AF history about 6 weeks and no operations. In pts with LAS up to 70mm and AF duration of more than 6 weeks effective SR restoration was achieved by the digoxin and cordarone combination. Verapamil was effective in pts with the paroxysms duration of no more than 2 weeks and LAS up to 50mm, and verapamil combination with digoxin was effective in pts after operative intervention.

In 40 pts with the constant AF (AF duration no more than 1 year) symptomatic treatment was carried out to decrease the activity of rheumatic process, cordarone (7 days) and heparine (3 days). Chinidine sulfate treatment (1,8-2,2 g/day) has allowed to restore SR in 70 % of the pts with HF III NYHA class and LAS up to 55 mm during 6 months follow-up. Chinidine sulfate was ineffective in the postoperative periode and HF IV NYHA class. In 7 pts with inefficient medicamentous AF treatment SR was restored by cardioversion. On the background of preventive using of ACE inhibitors in maximum tolerated doses during 2 weeks we were able to manage lessdoses of chinidine sulfate (0,6 g/day) to restore SR.

On the basis of our research the criteria were developed for the SR restoration treatment in paroxysmal AF which included LAS, HF class, rheumatic process activity, AF duration and previous operations.

EFFICIENCY OF TREATMENT PERIARTHROSIS HUMEROSCAPULARIS BY PERIFOCAL DRUG DEPOSITION WITH ELECTROPHORESIS

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The treatment was performed for 45 patients with periarthritis humeroscapularis (PH). All of them were complained of pain and decrease of movements of the shoulder.

21 patients with PH (I-st group) were treated by injections of hydrocortizone acetate (HCA) with electrophoresis of novocain.

On the first day 50 mg HCA with 10 ml 0,5% novocain were introduced by syringe in soft tissues of the shoulder by anterior, lateral and posterior spots - perifocal drug deposition was made. After that electrophoresis of novocain was performed every day for 10 days.

15 patients with PH (II-nd group) were treated only by injections in soft tissues of the shoulder with the above-mentioned drugs and technique. Electrophoresis of novocain was not applied.

9 patients with PH (III-rd group) were treated by electrophoresis of novocain every day during 10 days.

After the treatment the majority of the patients in all groups got better: pain was reduced, the mobility, on the contrary, increased. The treatment caused improvement in 18 patients of I-st group (85,7%), in 11 patients of II-nd group (73,3%), in 5 patients of III-rd group (55,5%). There were no complications due to the treatment in first two groups. Two patients of III-rd group had exacerbation of PH.

The method of perifocal drug deposition with electrophoresis may be recommended for application for outpatient departments and clinics.

OSTEOPOROSIS AS THE MAJOR RISK FACTOR IN ASYMPTOMATIC MULTIPLE MYELOMA

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The problem of osteoporosis is world-wide in people above 50 years of age. As this period is also a risk period for the development of multiple myeloma or other malignant process, comprehensive differential diagnosis of malignant and benign osteoporosis is essential. By retrospective analysis 12 years group of 330 patients with multiple myeloma, osteoporosis was the only finding on bones in 25% patients at time of diagnosis. From patients treated by chemotherapy on account of multiple myeloma the authors selected 151 patients treated in addition to chemotherapy with biphosphonates and immunomodulating drugs (mixture of proteolytic enzymes - Wobe Muges) for 3 years.

When biphosphonates (Bonelof, Bondronal) and chemotherapy were administered during a three-year observation period the bone process was stable in 61,59 %, osseous changes disappeared in 11,26 % and progression of osteolysis was recorded in 27,15 %. The objective of the work was to emphasize the importance of a correct diagnosis of osseous changes even in clinically asymptomatic myelomas.

Monthly injections of Bondronal was effective in subgroup of „responders“ (reduction of urinary crosslaps, osteocalcin and bone alkaline phosphatase) with prolongation of overall median survival.

THE PAINFUL KNEE ADOLESCENT ATHLETES: A CLINICAL AND THERMOGRAPHIC STUDY

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Objective: To follow the temperature level, thermal patterns and clinical findings in adolescent athletes in strained regions of the knee joint of equally young non-athletes with knee problems. To draw conclusions for the training session of adolescent.

Material and methods: 89 young athletes with painful knee, 28 adolescent non-athletes with painful knee and 20 athletes without complaints (total 137) were examined clinically and by infra-red thermography. Their age range was 14—17 years. In 31 athletes the cause of pain was trauma, in 58 the overloading. 28 non-athletes suffered on spontaneous pain in the knee joint.

Results: We found thermopathologic patterns in 108 and "normal thermogram" in 29 adolescents. The most common thermopathologic pattern in athletes was the hyperthermia under the patella in form of "U" after overloading of knee joint and also in non-athletes with painful knee. We also found false negative thermal pattern in athletes after trauma (6), after overloading (5) and in non-athletes (7). The false positive findings (9) we found in control group only.

Conclusion: On comparing our previous studies with the present ones we can suggest:

- the knee joint is very vulnerable in each sport,
- the thermal patterns of the affected knee joints and adjacent structures rarely form characteristic patterns,
- the variety of the thermal pattern is in adolescent athletes very high,
- it is necessary to have in mind that growth processes in the epiphyseo-diaphyseal area can be manifested in the thermogram.