

## 2.20 Behcet's disease and miscellaneous rheumatic conditions

703188

**Determination of serum visfatin level in patients with Behcet disease, comparing with normal population**S SHENAVANDEH<sup>1</sup>, M BARKHORDAR<sup>2</sup>, EK SARVESTANI<sup>3,4</sup>, E AFLAKI<sup>1,3</sup>, ZH AGAHI<sup>1</sup>, MA NAZARINIA<sup>1</sup>

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**Background:** Behcet's disease is an inflammatory, systemic and chronic disorder with unknown etiology affecting multiple systems of body (1). The cause is not clear but seems to be multifactorial, including immune system dysfunction (humoral and cellular immune defects), endothelial cell dysfunction and genetic predisposition (2). White adipose tissue produces variety of proteins in the name of adipocytokines, with important roles in body metabolism. One of these newly identified secreted adipocytokines is visfatin, which is secreted by the visceral fat and its plasma level increases during the obesity. It has insulin-mimetic effects in metabolism of cultured cells and activates the insulin receptor (3). Visfatin stimulates inflammatory cells like monocytes and can induce increasing circulating level of IL-6 in mice. It has been considered as a new proinflammatory adipocytokine (4). Previous studies have evaluated visfatin level in immunologic disorders like rheumatoid arthritis and showed it was significantly higher in comparing to control subjects (4,5,6). There was no evaluation in patients with behcet disease yet.

**Objectives:** We have evaluated visfatin level in patients with behcet disease finding inflammatory role of that in pathogenesis and clinical manifestations of behcet disease.

**Methods:** We have evaluated 40 patients with Behcet's disease fulfilled the International Study Group Criteria for the Diagnosis of Behcet's Disease (ISG) and 40 healthy subjects from healthy candidates referring to behcet clinic of Shiraz medical university as a referral center for these patients in south Iran. Both groups have been matched for age, body mass index (BMI) and sex. Visfatin was checked in both groups using ELISA Kit.

**Results:** There were no significant difference between cases and controls in mean concentration of visfatin level ( $P = 0.61$ ). Difference in the visfatin level between patients with active and inactive manifestations of Behcet's disease approximated to the significant levels ( $6.13 \pm 3.20$  and  $4.25 \pm 2.73$ , respectively;  $P = 0.07$ ).

**Conclusion:** In view of our study, we have concluded that visfatin levels may affect the clinical manifestations of BD maybe as a proinflammatory marker in pathogenesis and active manifestations of Behcet's disease although more cases should be included in future works.

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703270

**Serum melatonin levels in Behcet's disease patients with vascular involvement**G KESKIN<sup>1</sup>, A INAL<sup>2</sup>, L OZSIK<sup>1</sup>, R İLİKCI<sup>2</sup>

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**Background:** Behcet's disease is a chronic systemic vasculitis characterized by oral aphthous ulcers, genital ulcers, ocular disease, skin lesions, vascular disease and neurological disease. It's thought that infectious microorganisms, genetic factors and immune system abnormalities play role in the pathogenesis of the disease.

Melatonin is synthesized from tryptophan in the pineal gland, retina, kidneys and the gastrointestinal system. In the recent years some studies have been reported about the role of melatonin in the immune system and inflammatory diseases. It's known that melatonin increases the secretion of some cytokines and nitric oxide from the inflammatory cells. This effect is with the Th-1 cytokine response.

In this study we investigated the levels of serum melatonin in Behcet's disease (BD) patients with vascular involvement and melatonin's diurnal rhythm.

**Patients and methods:** In this study 21 BD patients with vascular involvement (nine female, 12 male, mean age  $26.4 \pm 5.2$  years, mean disease duration  $6.71 \pm 4.54$  years) and 20 healthy controls (seven female, 13 male, mean age  $26.8 \pm 5.2$  years) were included.

Serum melatonin levels were measured by ELISA, in the morning and night.

**Results:** In the BD patients group the mean serum melatonin levels were  $27, 4 \pm 10.9$  at night and  $19.7 \pm 8.6$  in the morning. In the healthy control group the mean serum melatonin levels were  $53, 2 \pm 18, 2$  at night and  $20.3 \pm 14.2$  in the morning.

There was no change in the diurnal rhythm of the melatonin in the BD patient group. Melatonin secretion at night was found to be lower in the BD patient group than the healthy control group and it was statically significant ( $P < 0.001$ ). There was no statically significant difference between the groups in the morning.

**Discussion:** It's unclear how melatonin influences the immune responses. In some of the studies it has been shown that there is a possible regulatory effect of melatonin and in some others it has been shown that melatonin inhibits the immune response by anti-inflammatory effect. BD is a chronic inflammatory disease. In this study we found that diurnal rhythm of the melatonin didn't change in BD patients but the serum melatonin levels at night were lower. These findings can be due to the effects of melatonin on the inhibition of inflammatory responses.

703283

**Clinical usefulness of HLA-B51 in patients with Behcet's disease of Korea**

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**Objectives:** To investigate the usefulness of HLA B-51 and its relationship with the clinical manifestations in patients with Behcet's disease of Korea.

**Methods:** Medical records of patients who were visiting to our rheumatology clinic from January 2011 to December 2011 were retrospectively reviewed. Total 103 patients with HLA B51 examination, who had at least one of symptoms associated with Behcet's disease, were enrolled. Demographic data and clinical features of Behcet's disease were collected. Behcet's disease was diagnosed according to International Criteria or criteria of International study group for Behcet's disease or Chang's criteria.

**Results:** Seventy-eight among 103 patients (75.7%) were diagnosed as Behcet's disease. The sensitivity of HLA B-51 for Behcet's disease diagnosis was 35.9% and the positive predictive value was 71.8%. The relative risk of HLA B-51 was 8.98 (95% CI = 3.33-24.20,  $P < 0.0001$ ). In the patients with Behcet's disease, the ratio of female to male was 2:1 and the mean age ( $\pm$ SD) was  $41.6 \pm 11.1$  years. The age of symptom onset was  $32.6 \pm 12.0$  years and the disease duration was  $11.0 \pm 8.8$  years. There were no differences of age and sex between HLA B-51 positive and negative group. The onset of symptoms tend to develop earlier in the Behcet's disease patients with HLA B-51 positive group ( $n = 28/78$ , 35.9%) than in the HLA B-51 negative group ( $n = 50/78$ , 64.1%,  $P = 0.047$ ). The absence of HLA B-51 was statistically significantly related with gastrointestinal symptoms ( $n = 16$ ,  $P = 0.006$ ), especially in the subset of ileocecal ulcerations ( $n = 9$ ,  $P = 0.023$ ). There were no differences in other clinical features such as oral/ genital ulcer, uveitis, skin lesion, arthritis, vasculitis and nerve involvement.

**Conclusion:** The sensitivity and positive predictability of HLA B-51 for Behcet's disease in our cases were not high, but the absence of HLA B-51 was significantly associated with gastrointestinal ulceration features of patients. Clinicians should be awareness about the risk of gastrointestinal involvement in Behcet's disease patients without HLA B-51.

703385

**The distinct expressions of interleukin-15 and interleukin-15 receptor  $\alpha$  in Behcet's disease**

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**Objective:** Interleukin-15 (IL-15) is a pleiotropic cytokine that is involved in the pathogenesis of diverse inflammatory rheumatic diseases. The aims of this study were to compare serum IL-15 levels and expression of its receptor (IL-15R $\alpha$ ) in Behcet's disease (BD) with those in other rheumatic diseases, and to identify the relationship between serum IL-15 levels and various clinical parameters in BD.

**Methods:** One hundred fifty-eight subjects consisting of 40 BD, 38 systemic lupus erythematosus (SLE), 40 rheumatoid arthritis (RA), and 40 healthy controls were enrolled. Serum IL-15 levels were measured using an enzyme-linked immunosorbent assay. The proportion of IL-15R $\alpha$  expression on each leukocyte subset was measured by flow cytometry. Erythrocyte sediment rate (ESR) and C-reactive protein (CRP) were measured for each enrolled subject. The clinical activity index of BD was assessed for BD patients.

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**Results:** Serum IL-15 levels in BD patients are significantly higher than those of healthy controls, SLE, and RA patients ( $P < 0.001$ ,  $P < 0.001$ , and  $P < 0.001$ , respectively). Serum IL-15 levels in BD were closely related with ESR ( $r = 0.405$ ,  $P = 0.027$ ), but not with CRP or the clinical activity index of BD ( $P > 0.05$  for both). Additionally, there was no difference in serum IL-15 levels between active and inactive disease states in BD ( $P > 0.05$ ). The proportion of IL-15R $\alpha$  expression on total leukocytes was much lower for all rheumatic diseases, including BD, than in healthy controls ( $P < 0.01$  for SLE,  $P < 0.01$  for RA, and  $P < 0.05$  for BD).

**Conclusion:** IL-15 and IL-15R $\alpha$  system may be involved in the inflammatory process and pathogenesis of BD.

**Key words:** Behçet's disease, interleukin-15, interleukin-15 receptor  $\alpha$ , ESR.

703659

### The retrospective review of 39 intestinal Behçet's disease focusing on the requirement for the immunosuppressive drugs other than corticosteroid

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**Objective:** To examine the demography, clinical characteristics, features of intestinal lesions, treatment, and prognosis in patients with the intestinal Behçet's disease currently followed at a university hospital in Tokyo especially focusing on the factors that correlated with additional immunosuppressive therapies to corticosteroid.

**Method:** The records of 39 patients with intestinal Behçet's disease were retrospectively reviewed who were treated at the Teikyo University Hospital between August 1st, 2011 and March 31st, 2012. We compared the well-controlled patients treated only with steroid or 5-ASA/SASP, with the poorly-controlled patients who required additional immunosuppressive drugs or anti-TNF $\alpha$  antibodies.

**Results:** The patients were consisted of 26 male and 13 female with the average age of  $56.8 \pm 13.1$  years old. The mean age at onset of Behçet's disease was  $35.5 \pm 11.2$  years. They developed the intestinal lesions at mean age  $41.3 \pm 13.0$  years. HLA-B51 or HLA-A26 were positive in 35.4% or 32.3%, respectively. Seventeen cases were complete Behçet's and 22 were incomplete type. Almost all patients had oral ulcerations and skin lesions. Twenty five cases had arthritis, seven had epididymitis. Vascular and central nervous system involvements were seen in eight and two patients, respectively. The most frequent initial symptom for intestinal Behçet's was abdominal pain (22 cases). Other initial symptoms were melena/bloody stool (16 cases) and diarrhea (nine cases), fever (five cases), dysphagia (two cases). The intestinal lesions existed in various lesions of the gastrointestinal tract including esophagus (three cases) and small intestine (four cases), ileo-cecal area (31 cases), ascending colon (seven cases), transverse colon (three cases), descending colon (three cases), sigmoid colon (two cases), rectum (five cases). They (28 cases) were treated with prednisolone of the average 32.5 mg daily as the initial dosage. Thirty two patients were treated 5-ASA or SASP. Fourteen cases were added with methotrexate, and three cases with cyclosporine. Infliximab was administered in six cases. In the patients who needed immunosuppressive drugs or anti-TNF $\alpha$  antibodies other than steroids, we found the significantly higher HLA-B51 positivity (42%) and higher CRP at the beginning of treatment ( $10.5 \pm 8.5$  mg/dL). In addition, the poorly responded patients with corticosteroid and sulfasalazopyridine showed more frequent atypical intestinal lesions.

**Conclusion:** The retrospective review revealed that the requirement for the additional immunosuppressive therapies could have a linkage to the HLA-B51 in patients with intestinal Behçet's disease.

703896

### Important results derived from our 50 year-experience on familial Mediterranean fever

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**Background:** Familial Mediterranean Fever (FMF) is the first described one and prototype of the auto inflammatory diseases. It is quite prevalent in Turkey. My interest in FMF was started in 1960 and I have been involved deeply since then. We organized First International Symposium on FMF at Istanbul in 1983.

**Objectives:** To present our most important results and conclusions obtained from our long experience

**Methods:** Our cohort is consisted of 544 patients (male 306, female 238, M:F 1.28) diagnosed according to our criteria. In most of the patients the disease started at juvenile age. With a few exceptions they had a recessive inheritance. Family history was obtained in 41% of our cases.

**Results:** Peripheral arthritis is one of the cardinal manifestations and the most common isolated initial symptom. Interestingly enough it does not usually coincide with the other attack components. We described three cases of typical ankylosing spondylitis associated with FMF in 1963 and since then we have observed many such cases. HLA-B27 was not found to be associated. Additionally we have also had cases fulfilling the spondyloarthritis criteria. Depending to these observations we proposed that FMF should be included into the spondyloarthritides group of disorders. AA amyloidosis is an important component of its pathology (11%). We have been using colchicine successfully as the drug of choice since 1962. Its prophylactic effect was found to be very successful on amyloidosis and 81.7% particularly on fever, abdominal pain and chest pain but less on arthritis. We also observed two cases of Behçet disease in our cohort. We published our diagnostic criteria in 1997. We believe that it is much simpler and practical than the others.

**Conclusion:** FMF is an important disease for the physicians of different disciplines in Turkey. During last 50 years we have obtained many important features and information and became more capable in its early diagnosis and treatment.

703924

### Frequent oral ulceration during early disease may predict a severe disease course for men with Behçet's syndrome

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**Objective:** Mucocutaneous manifestations are common manifestations of Behçet's syndrome (BS). Their numbers and recurrence rates can be highly variable between patients but it is not known whether these differences influence the disease course of BS at the long-term.

**Methods:** We recently showed that 43% of 91 male BS patients who had entered a 6 months placebo controlled trial of thalidomide had to use immunosuppressives for any complications during the post-trial period. This time, we evaluated only the 30 patients that made-up the placebo arm and looked at the relation between the frequencies of mucocutaneous manifestations during the trial and the use of immunosuppressives during the post-trial period.

**Results:** Fifteen (50%) patients had received immunosuppressives for major complications during the post-trial period. Patients receiving immunosuppressive treatment had significantly younger age at the onset of BS than those who did not develop organ involvement ( $24.5 \pm 5$  versus  $29.7 \pm 3.8$  SD years;  $P = 0.003$ ). The mean number of oral ulcers recorded throughout the trial was significantly higher among patients using immunosuppressives compared to those who did not ( $2.09 \pm 0.96$  versus  $1.43 \pm 0.8$ ;  $P = 0.029$ ). This significance, however, disappeared when adjusted for age at onset of BS ( $P = 0.16$ ). ROC curve analysis showed a cut-off of more than nine ulcers during 6 months has a sensitivity of 86.7% and a specificity of 53% for the use of immunosuppressives. The mean numbers of genital ulcers, follicular lesions and erythema nodosum did not differ between patients regarding the use of immunosuppressives.

**Conclusion:** These findings on a limited number of patients suggest that frequent occurrence of oral ulceration during the initial years of the disease may predict the development of organ involvement in men with BS.

**Disclosure of Interest:** None Declared

703939

### Subclinical atherosclerosis and oxidized LDL levels in familial Mediterranean fever

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**Objectives:** To investigate markers of carotid atherosclerosis and oxidized low density lipoprotein (oxLDL) levels in patients with Familial Mediterranean Fever (FMF) who have no risk factors for cardiovascular disease.

**Methods:** We studied 44 patients (25 F/19 M; mean age:  $33.5 \pm 7.5$ ) with FMF in attack free period and gender and age matched 44 healthy subjects (25 F/ 19 M; mean age:  $33.4 \pm 7.0$ ). Exclusion criteria were clinical coronary artery disease, chronic renal disease, diabetes mellitus, hypertension, history of myocardial infarction, angina pectoris or cerebrovascular disease, dyslipidemia, metabolic syndrome or active infection. Those who were in postmenopausal status and using anti-lipid drugs were also excluded. We measured carotid artery intima-media thickness (IMT) and investigated presence or absence of atherosclerotic plaques in the carotids, using Doppler ultrasound. We also assessed serum lipid and OxLDL levels.

**Results:** Mean disease duration of the FMF patients was  $20 \pm 9$  years. The mean carotid IMT (C-IMT) did not differ between patients and controls ( $0.52 \pm 0.10$  mm versus  $0.53 \pm 0.06$  mm, respectively,  $P = 0.709$ ). None of the patients or controls had atherosclerotic plaques. Total and LDL cholesterol levels were significantly lower among patients compared to controls (total cholesterol:  $157.07 \pm 34.18$  versus  $181.05 \pm 36.79$ , respectively,  $P = 0.002$ ; LDL cholesterol:  $100.48 \pm 30.13$  versus  $126.25 \pm 34.05$ , respectively,  $P = 0.001$ ). Whereas OxLDL levels were significantly higher in FMF patients ( $337.48 \pm 438.56$  ng/dL) when compared to controls ( $156.19 \pm 383.24$  ng/dL), ( $P = 0.044$ ). There was no correlation between CIMT and OxLDL levels among both patients ( $r = -0.156$ ,  $P = 0.324$ ) and controls ( $r = -0.196$ ,  $P = 0.246$ ).

**Conclusions:** Our study supports further evidence for no increased atherosclerosis in FMF. As previously shown patients with FMF have low cholesterol levels when compared to healthy controls (1-2). On the other hand, increased OxLDL levels could be associated with increased sub-clinic inflammation.

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703953

**Characteristics, treatment and outcome of GI involvement in Behcet syndrome (BS): experience in a dedicated center**I HATEMI<sup>1</sup>, G HATEMI<sup>2</sup>, Y ERZIN<sup>1</sup>, A FERHAT CELIK<sup>1</sup>, H YAZICI<sup>2</sup><sup>1</sup>Istanbul University Cerrahpasa Medical School, Gastroenterology, Istanbul, Turkey,<sup>2</sup>Istanbul University Cerrahpasa Medical School, Rheumatology, Istanbul, Turkey**Background:** Controlled data regarding the treatment of gastrointestinal involvement of BS is lacking and long term prognosis is not well known.**Objectives:** To report the demographic and disease characteristics, type of involvement, treatment modalities and outcome of BS patients with gastrointestinal involvement (GIBS).**Methods:** We retrospectively reviewed the charts of all BS patients evaluated by gastroenterologists in our multidisciplinary BS clinic with a suspicion of gastrointestinal involvement, and surveyed those with a diagnosis of GIBS. Patients were evaluated either in the outpatient clinic or if not possible by phone calls to assess their outcome.**Results:** There are more than 8000 recorded BS patients in our multidisciplinary outpatient clinic. Sixty-nine of them had symptoms suggesting gastrointestinal involvement and lesions on endoscopy. Among these, 18 patients had other reasons for their gastrointestinal symptoms. The remaining 51 patients had GIBS (Table). Surgery had to be performed in 20/51 patients. The most commonly used drugs for initial management were azathioprine 2–2.5 mg/kg/day (n = 33) and 5 ASA compounds 3–4 g/day (n = 13). Remission was observed and there were no relapses during a mean follow-up of 44.3 ± 46.9 months in 22/33 (67%) patients who had initially been prescribed azathioprine (2.5 mg/kg) and during 45.0 ± 50.1 months in 9/13 (68%) patients who had been prescribed 5 ASA compounds. Other than the 33 patients who used azathioprine as their initial treatment, remission was also obtained with azathioprine in 3/4 patients who were resistant to 5 ASA compounds. Among the 10 patients who had relatively severe symptoms and persistent large ulcers despite at least 6 months of azathioprine treatment, endoscopic and symptomatic remission could be obtained with thalidomide in four patients, infliximab in four patients and adalimumab in two patients. After a mean follow-up of 7.1 ± 4.8 years (range 0.25–17 years), 42 (84%) patients were in remission and 14 (28%) of these were off treatment. Four (8%) patients were still active, 3 (6%) patients had died due to non-GI related reasons and 2 (4%) were lost to follow-up.**Conclusions:** Eighty-four per cent of patients with GIBS were in remission after a mean of 7 years of follow-up. Surgery was required in 40% of patients with GIBS. Five ASA compounds or azathioprine provided remission and prevented relapses in two thirds of the patients. The latter was also beneficial in some patients resistant to 5 ASA compounds. Resistant and relapsing cases could be managed with thalidomide or TNF-alpha antagonists.

Patients with GI involvement of BS (n)	51
Men:women	27:24
Mean age ± SD (years)	38.5 ± 9.3
Mean age at diagnosis of GIBS ± SD (years)	31.2 ± 7.1
Oral ulcers	51/51
Genital ulcers	43/51 (86%)
Positive pathology reaction	27/51 (54%)
Skin lesions	34/51 (68%)
Arthritis	17/51 (33%)
Uveitis	10/51 (20%)
Vascular involvement	6/51 (12%)
Neurologic involvement	5/51 (10%)

703996

**Rheumatological feature of lipid disorders**

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HMC, Qatar

**Background and Introduction:** It's well known that hyperlipidemia increase the risk of CVD and CAD, so the tight control of it and recommendation to lower it is established to reduce the incidences of those event & reduced morbidity as well as mortality.

But it's little known about rheumatic manifestation of lipid disorders and related conditions.

**Objective:** To look for more details and new rheumatic manifestation of dyslipidemia.**Methods:** Peer review search of English published articles concern of rheumatic manifestation of lipids disorders focus on multicentric histiocytosis as well as drugs ...in dyslipidemia.**Results:** In the last decade the application of this results not shown only validity to high risk people and condition such as HTN, DM, obesity, but also money studies have been shown the same morbidity related to CVD in SLE and RA, and no drought that necessary to approach these disease as risk of CAD, however in the last few years the few articles has been published showing the same in another inflammatory arthritis such As and PsA..

In the last two decades of using lipid lower drugs raised more data about some side effect mainly myopathy and some new benefit indication such hyperuricemia which interested to rheumatologist. But so far very few data added in rheumatic feature of hyperlipidemia, so more little about multicentric reticulohistiocytosis (MCH) has added in eathiopathology and treatment. In this review discussing the money aspect of rheumatic manifestation of

lipid disorders and new data of MCH rheumatological manifestation and its recent treatment as well as some drugs used in dyslipidemia with benefit and side effect balance

**Conclusion:** Dyslipidemia is common complication and its treatment has some disadvantages which physician should be aware, but also has some other advantages benefit treatment in such condition, however new clear data of MCH has been recently raised with highlight important issue for rheumatologist**References:** 1. Arch Dermatol. 2008 144, Ann Rheum Dis 2005;64, JADV (2001)

2. ARCH DERMATOL/VOL 140, AUG 2004, eMedicine's, Pathology Outline Dec 2009.

704025

**Decrease of progressing chronic heart failure and rheumatic heart disease by vaccination of patients against influenza**

AN KALYAGIN

Irkutsk State Medical University, Municipal Hospital 1, Irkutsk, Russia**Purpose:** To estimate the opportunity of use of vaccination against influenza in order to decrease a risk of progressing chronic heart failure (CHF) on the background of rheumatic heart disease (RHD).**Methods:** There have been examined 80 randomly selected patients with RHD, verified on data of history, clinical signs and ECG, aged 49 (32–64) years. The criteria of including were: presence of CHF, absence of activity of rheumatic process. The patients were divided into two groups: 1 (main group) – patients with CHF on the background of RHD, vaccinated against influenza (n = 35) and 2 (control group) – not vaccinated patients (n = 45). The vaccine Vacsigrippe was used, there were no any adverse reactions. The patients in the groups were initially compared on age, sex, type of pathologies of valves, smoking duration and smoker index. Standard therapy CHF was given to all the patients (including inhibitors of ACE, beta-adreno-blockers, diuretic, spironolactone and digoxin). The time of observation – 1 year. The data on the results was presented in the form of mediana, minimum and maximum. Statistical processing included one-factor dispersion analysis, test Student's and  $\chi^2$ .**Results:** The frequency of respiratory infections in the patients of the 1<sup>st</sup> group has decreased in 2.6 times (P = 0.021) as compared with the 2nd group, however in 11 (31.4%) of patients they have been registered (three cases of acute respiratory viral infection, six cases of pneumonia, two cases of aggravation of chronic bronchites). Respiratory infections have been registered in four smokers of five ones. In the control group there have been revealed 27 (60.0%) cases of respiratory infections (18 cases of acute respiratory virus infection, seven cases of pneumonia, two cases of aggravation of chronic bronchites). Respiratory infections have been registered in five smokers of seven ones. General frequency of hospitalizations of the patients with CHF from the 1st group essentially has decreased as compared with the 2nd group (decrease of relative risk = 2.2, P < 0.001). It is necessary to mention that during the observation's period there wasn't registered any essential difference in frequency of fatal outcome in both groups, though there was noted a tendency to mortality decrease in the 1st group. In comparing the indices of CHF it was defined that in the 1st group functional class (P = 0.324) practically was not changed. In the 2nd group functional class (P < 0.001) essentially increased.**Conclusion:** Vaccinal prevention of influenza allows to influence effectively upon such risk factor of progressing CHF in the patients with RHD as intercurrent infections of respiratory tract and to achieve essential decrease of hospitalization frequency and lethality, as well.

704026

**The estimate of risk of chronic heart failure decompensation in patients with rheumatic heart disease**

AN KALYAGIN

Irkutsk State Medical University, Municipal Clinical Hospital 1, Irkutsk, Russia**Purpose:** The purpose of our investigation was to estimate the risk of decompensation development of chronic heart failure (CHF) on the background of rheumatic heart disease (RHD).**Methods:** There have been examined 578 patients aged 25–72 years with verified RHD. The criteria of including in the investigation were: presence of CHF on Flemingem's criteria and absence of activity of rheumatic process. The patients were divided into two groups: (i) patients, who had compensated CHF (I-II functional class) – 428 (7.0%), and (ii) patients, having decompensated CHF (III-IV functional class) – 150 (26.0%). The patients in the groups were equal in type of pathology of valves, sex and age. Estimation of expressiveness of CHF was conducted on the scale of Mareev (2000) and on the test of 6-min walk. Every risk factor (RF) was carefully revealed. Relative risk (RR) was also calculated. Statistical processing has been carried out on the Mack-Nimar's criteria in programme package Statistica for Windows v. 6.0 (StatSoft, USA).**Results:** Hereditary, which was complicated with presence of acute rheumatic fevers in relatives, was reliably registered in 188 patients (32.5%) and prevailed in the group of patients with decompensation (RR = 1.5, P = 0.001).

Anemia was revealed in 190 (32.9%) patients, mainly iron-deficiency anemia, that was proved with data of tests (RR = 1.9, P &lt; 0.001).

Heavy physical labor with duration no &lt;5 years in the history was established in 96 patients (16.6%) (RR = 2.2, P &lt; 0.001). At the same time hypodynamia was the main risk factor of CHF decompensation in patients with RHD (RR = 1.8, P &lt; 0.001). Low level of life has been revealed in 119 (20.6%) patients. This index was not significant for progressing CHF. Apparently, risk factors are accumulated out of clear connection with this index. It was established that smoking gives RR = 1.7 (P = 0.017), alcohol — RR = 2.4 (P = 0.037), salt — RR = 1.7 (P = 0.007).

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Respiratory infections, such as influenza, pneumonia, aggravation of chronic bronchitis are important risk factors of CHF decompensation, even single episode of respiratory infection during a year may influence significantly upon disease decompensation. In total, respiratory infections were registered in 179 (30.9%) patients (RR = 1.6, P = 0.001) before the primary examination.

**Conclusion:** Thus, risk factors play significant role in the CHF decompensation development in patients with RHD.

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### Update on treatment of Behçet's disease

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1. Behçet's disease is an inflammatory multisystemic disorder characterized by recurrent oral ulcers, genital ulcers and involvement of the cutaneous (erythema nodosum), ocular (anterior or posterior uveitis), musculoskeletal, vascular (both arterial and venous vasculitis), gastrointestinal and central nervous (meningo-encephalitis) systems.
2. The choice of treatment of Behçet's disease depends on the patient's clinical manifestations.
3. Mucocutaneous lesions are treated with topical corticosteroids, tetracycline, colchicine, dapsone, or thalidomide.
4. Arthritis is treated with non-steroidal anti-inflammatory drugs (NSAIDs), systemic steroids and local corticosteroid injections. Colchicine, sulfasalazine and methotrexate are also used.
5. Uveitis is treated with topical drops (i.e. both mydriatic and corticosteroid drops), systemic corticosteroids, azathioprine, cyclosporine, chlorambucil, tacrolimus, or cyclophosphamide.
6. Central nervous system disease usually is treated with corticosteroids, chlorambucil, or cyclophosphamide.
7. Gastrointestinal lesions usually are treated with corticosteroids, sulfasalazine, or thalidomide.
8. Interferon alpha-2a is useful in oral and genital ulcerations, as well as papulo-pustular lesions, erythema nodosum, thrombophlebitis, articular symptoms and ocular disease.

Tumor necrosis factor alpha (TNF-alpha) antagonists, such as etanercept or infliximab have been used in treating CNS vasculitis, colonic ulcerations, esophageal ulcerations, panuveitis, mucocutaneous ulcers and polyarthritis

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### Increasing roles of flight surgeons to check for rheumatic conditions during their medical examinations of pilots

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Rheumatologic diseases and related syndromes are associated with a variety of immune abnormalities, and testing for these alterations in the immune response may be useful for diagnosis and management of person with these diseases.

In the last decades, accepting more women for military and civil flying duties and production of airplanes which can fly long distance and high performance military aircraft's at our country have increased our flight surgeons responsibility for their duties.

Now, with this respect, we have to detect the abnormality at the right time and the right place and do the right action.

As we all know, selecting right person to right job will bring the success for military and civil missions. Maintain the safe air travel makes our responsibility higher too.

With the help of new technologic laboratory methods, early detection of rheumatic conditions and risks related to them has being possible for us.

The history and physical examination remain the cornerstones in the evaluation of the military or civil flying person with rheumatic and musculoskeletal symptoms. They provide the clinical basis for further laboratory or radiological testing.

The goals of laboratory testing for rheumatic diseases during the flying medical examinations will be summarized.