IDEOLOGY OF THE MODERN SYSTEM OF STROKE PREVENTION
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Modern views of stroke prevention are discussed. Novel and traditional concepts of pathogenesis of acute disorders of cerebral circulation are summarized for the first time, methods for individual prognostication of vascular events are proposed. Universally recognized strategies of stroke prophylaxis are analysed and new approaches to differential preventive treatment depending on the probability of development of pathogenetic variants of cerebral circulation disturbances are proposed. Organizational aspects of preventive cardioneurology are considered.

KEY WORDS: stroke; stroke prevention; cardioneurology; preventive cardioneurology; arterial hypertension; cardioembolism; atherothrombosis.

THE DISEASE AS A PHENOMENON OF HUMAN NATURE: TOWARD UNDERSTANDING AND DEVELOPING OF V.KH.VASILENKO’S PHILOSOPHICAL LEGACY. PART 1
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V.Kh. Vasilenko paid much attention to the development of philosophical aspects of the concept of disease and left the rich intellectual legacy and a number of advisory instructions that allow the main challenge in modern medicine (the definition of the notion of disease) to be addressed. One of his principal messages is the necessity of generalization and synthesis of facts. Following Vasilenko's instructions, Part 1 of this review is devoted to systematization of modern views of general features of pathogenesis of internal diseases for obtaining a deeper insight into the essence of the disease.

KEY WORDS: disease, pathology, disease etiology; pathogenesis; internal diseases; philosophy of medicine.

IDIOPATHIC INFLAMMATORY MYOPATHIES: MAIN CLINICAL AND IMMUNOLOGICAL VARIANTS, DIFFICULTIES OF DIFFERENTIAL DIAGNOSTICS AND THERAPY
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Idiopathic inflammatory myopathies are rare autoimmune diseases with inflammatory lesions in skeletal muscles. They include polymyositis, dermatomyositis, juvenile myositis and inclusion body myositis. These are clinically and immunologically heterogeneous conditions differently responding to therapy. The authors consider the main manifestations of polymyositis/dermatomyositis and principal differences between them. Therapy is based on the prescription of glucocorticoids in combination with immunesuppressors, Better understanding immunological, genetic, and molecular mechanisms opens up new prospects for the management of idiopathic inflammatory myopathies.

KEY WORDS: idiopathic inflammatory myopathy; polymyositis; dermatomyositis; juvenile myositis and inclusion body myositis; glucocorticoids.

PHYSIOLOGICAL AND CLINICAL IMPLICATIONS OF GASTRIC PEPSINOGENS
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This review deals with pepsinogen metabolism, physiological role, and clinical implications. Effects of various factors, e.g H.pylori, on pepsinogen levels are considered. It is concluded that non-invasive screening of gastric precancer conditions provides a cost-effective and efficacious approach to the prevention of this pathology.

KEY WORDS: pepsinogens; metabolism; clinical significance; Helicobacter pylori.
FAMILIAL MEDITERRANEAN FEVER (PAROXISMAL POLYSEROSITIS, FAMILIAL RECURRING POLYSEROSITIS, PERIODIC DISEASE)
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Paroxismal polyserositis is an orphan disease most often affecting Mediterranean populations. It is caused by a mutation on chromosome 16 leading to pyrine synthesis disorder. The disease has a characteristic clinical picture, the most prominent manifestation being recurrent aseptic inflammation of serous membranes especially in peritoneum, marked temperature reaction, and apparent spontaneous recovery in the attack-free period. Inadequate or excessively intense treatment may cause complication in the form of secondary amyloidosis of internal organs. The most effective therapeutic modality is daily intake of colchicine at a dose of 1—1.5 mg.

Key words: familial Mediterranean fever; clinical picture; diagnostics; treatment.

DIURNAL PROFILE OF ARTERIAL PRESSURE IN HEALTHY RESIDENTS OF NORTHERN REGIONS
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Five-year observations yielded diurnal profiles of arterial pressure (AP) in practically healthy residents of the north of Tyumen region. Their analysis revealed the enhancement of AP variability in dayand nighttime (especially diastolic AP), elevated rise of morning AP in the absence of adequate decrease of nocturnal AP.

Key words: diurnal profiles of arterial pressure; North; healthy subjects.

ARRHYTHMIA IN PATIENTS WITH CHRONIC HEART INSUFFICIENCY AND TYPE 2 DIABETES MELLITUS
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The aim of the work was to study character, frequency and peculiarities of arrhythmia in patients with chronic heart insufficiency (CHI) depending on its etiology and type 2 diabetes mellitus (DM2).

Materials and methods. In-depth clinical observation of 197 patients (mean age 61.3±0.63 yr, 56-61% men) included EchoCG, 6 min walk test, Holter ECG monitoring. Group 1 was comprised of 74 patients with CHI (NYHA FC II), group of 2 80 patients with HPI an DM2, group 3 of 50 patients with CD2 (ADA criteria, 2011). The groups were matched for sex, age, severity of disease and complications. Exclusion criteria were acute coronary heart disease, CHI and DM2 decompensation, CHI according to BHOK and OCCH National recommendations (2009).

Results. 43.2% of the patients showed ventricular arrhythmia (VA) (p<0.02), 10.8% had ciliary arrhythmia. Combined arrhythmia (ventricular and supraventricular arrhythmias, hemodynamically significant atrial fibrillation and high-grade ventricular arrhythmias) occurred in 41.2% of the patients having CHI+DM2. 62.8% of the DM2 patients had supraventricular arrhythmias.

Conclusion. Hemodynamically and prognostically unfavourable arrhythmias are most frequently diagnosed in the patients with CHI and DM2 due to more pronounced myocardial failure and DM2-associated pathogenetic factors (dysglycemia, cardiac neuropathy, nephropathy).

Key words: arrhythmia; chronic heart insufficiency; type 2 diabetes mellitus.

THE ALTERED ENDOTHELIAL FUNCTION IN PATIENTS WITH ARTERIAL HYPERTENSION AND DIFFERENT FORMS OF ATRIAL FIBRILLATION
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The role of endothelial function in the development of cardiovascular diseases has recently attracted attention of many researchers due to increasingly more data suggesting the relationship between endothelial dysfunction (ED) and disturbed cardiac rhythms including atrial fibrillation (AF). ED is known to precede lesions in target organs related to arterial hypertension (AH) which makes the study of endothelial function as an early marker of vascular lesions in AH and AF a topical issue.

Aim. To study changes of endothelial function in patients with AH andAF.

Materials and methods. Group 1 included 84 patients with AH (inclusion criteria: essential AH and confirmed paroxysm of AF), group 2 contained 20 patients with AH and permanent AF, control group was comprised of
30 AH patients without AF. The vasomotor function of endothelium was evaluated from reactive hyperemia determined by the ultrasonic method, blood samples for biochemical analysis and determination of Willebrand factor (WF) were taken during fasting.

Results. Patients of group 2 showed significant changes of endothelium-dependent vasodilation of the brachial artery. Its diameter within 60 sec after decompression increased by 5.8+0.9% and 12.3+1.2% in groups 1 and 3 respectively (p<0.05). In group 2, collagen-binding activity of WF increased significantly to 1500+140 U/100 ml compared with 1060+120 and 840+110 in groups 2 and 3 (p<0.05).

Conclusion. Patients with AH and persistent AF had altered endothelial function in the form of significant decrease of endothelium-dependent vasodilation of the brachial artery and increase of collagen-binding activity of WF.

**Key words:** endothelial dysfunction; atrial fibrillation; artery hypertension; Willebrand factor.

**KM-1403-047**

**THE STATE OF VEGETATIVE NERVOUS SYSTEM AND THE RISK OF REPEATED HOSPITALIZATION AFTER ELIMINATION OF HYPERTONIC CRISIS**

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Observation of 58 outpatients with arterial hypertension (AH) revealed a group of 25 subjects who needed repeated hospitalization within 1 year after hypertonic crisis due to unstable conditions (group 1). The two groups were comparable in terms of office AP measurements, but 24 hr AP, systolic AP and its variations were significantly higher while daily index was lower in group 1. Moreover, patients of this group had decreased variability of the cardiac rhythm with increased activity of the suprasegmental level and reduced parasympathetic activity. A rise in BMI in these patients correlated with the state of sympathetic component of the vegetative nervous system. It is concluded that normalization of office AP can not be regarded as evidence of benign course of the disease; evaluation of daily AP characteristics, BMI, and balance of vegetative nervous system is needed to stratify risks for the outpatients with AH followed up after the treatment of hypertonic crisis.

**Key words:** arterial hypertension; hypertonic crisis; vegetative nervous system; arterial pressure.

**KM-1403-050**

**THE USE OF VEROSPIRON AND THE DEGREE OF PLATELET AGGREGATION IN ARTERIAL HYPERTENSION WITH ABDOMINAL OBESITY**

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Aim. Comparative analysis of effects of hypothiazide and verospiron on platelet aggregation in patients with arterial hypertension and abdominal obesity.

Materials and methods. Hypothiazide and verospiron were prescribed to 28 and 23 patients respectively for 16 weeks. The parameters estimated included dynamics of blood lipid profile, lipid peroxidation in plasma and platelets, antioxidant protection of the blood liquid fraction and platelets, platelet aggregation. The results were treated with the use of Student’s t-test.

Results. Verospiron had positive influence on peroxidation syndrome and platelet aggregation. Its prolonged application maintained the achieved effect. Hypothiazide did not change the parameters of interest.

Conclusion. Combined verospiron and non-medicamental therapy is recommended to reduce body mass in patients with arterial hypertension and abdominal obesity.

**Key words:** arterial hypertension; abdominal obesity; platelets; verospiron.

**KM-1403-054**

**NEUTROPHIL GELATINASE-ASSOCIATED LIPOCAIN AS A PREDICTOR OF ACUTE RENAL LESION IN PATIENTS WITH ACUTE CORONARY SYNDROME**

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Aim. To estimate the possibility of using neutrophil gelatinase-associated lipocain (NGAL) as a predictor of acute renal lesion (ARL) in patients with acute coronary syndrome (ACS). Only those patients were included in whom coronarography was found to be impracticable which allowed to exclude the development of contrast-induced ARL. A total of 122 patients with ACS (69 men and 53 women, mean age 64+11 yr) were available for examination. 18 (15%) patients had acute myocardial infarction without ST elevation, 73 (60%) presented with unstable angina. ARL was diagnosed and classified following KDIGO recommendations (2012). Serum creatinine level was determined at admission. Urine NGAL level was measured by an immunoenzyme assay. ARL was diagnosed in 27(22%) patients (stage 1 in 26%, stage 2 in 1%). NGAL level above 82 ng/ml was a highly specific (99%) predictor of ARL in patients with ACS, but its sensitivity did not
exceed 20%. It is concluded that urinary NGAL is a moderate predictor of ARL in patients with ACS whose
specificity increases with increasing urinary level.

**Key words:** acute coronary syndrome; acute renal lesions; neutrophil gelatinase-associated lipocain.

**KM-1403-059**

**EVALUATION OF METHOTREXATE EFFECT ON THE ACUTE-PHASE RESPONSE IN RHEUMATOID ARTHRITIS AFTER 12 WEEK TREATMENT**


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DAS28 index calculated with regard for ESR, the number of swollen/painful joints and evaluation of the
patient's condition by VAS is universally used to estimate activity of rheumatoid arthritis (RA). There is a
variant of calculation using C-reactive protein (CRP) instead of ESR. Our experience indicates that ESR
decreases more slowly than CRP during treatment and better reflects dynamics of patients’ condition. From
the practical standpoint it is important to estimate activity of RA because therapeutic modalities are chosen
based on the DAS28 value.

Aim. To study the influence of pharmaceutical form of methotrexate on the acute-phase response in
rheumatoid arthritis. Materials and methods. The study included 32 patients (24 women, 8 men) aged 19—
76 (mean 47.5±28.5) yr with active RA (DAS28>3.2) 4—30 months (11.5±7.4, median 8) in duration.
Diagnosis was made using AXR criteria (1987), none of the patients previously received methotrexate
injections. Inclusion criteria: initially high ESR (Westegren, mm/hr) and/or CRP (mg/l measured by a highly
sensitive method). All patients were given methotrexate subcutaneously for 12 weeks as monotherapy (initial
dose 10 mg, maximum one 25 mg/week). The cumulative dose was 211.36±17.2 mg.

Results. Side effects did not require withdrawal of methotrexate. CRP level decreased faster than ERS: a
70% decrease of CRP by week 12 was recorded more frequently than that of ESR. Slow dynamics of the
number of swollen joints compared with CRP may be due to the low cumulative dose of methotrexate.
Duration of the disease had no effect on dynamics of acute phase characteristics. Conclusion. Methotrexate
injections resulted in markedly delayed development of clinical signs of improvement compared with
laboratory values. CFP levels fell down much faster than ESR, Remission or low activity of RA (estimated
from DAS28) occurred only in 38% of the cases after 3 month monotherapy by methotrexate injections. It is
concluded that efficacy of this drug should be estimated no sooner than 4 months after the onset of the
treatment.

**Key words:** rheumatoid arthritis; methotrexate; ERS; C-reactive protein; number of swollen joints;
cumulative doses.

**KM-1403-063**

**GASTROINTESTINAL HEMORRHAGE IN CARDIOSURGERY IN PATIENTS WITH ENDOTHELIAL DYSFUNCTION**

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Aim. To estimate the prognostic value of the hypoxic test, intragastric pH-metry, and endothelial dysfunction
in cardiosurgical patients at risk of gastrointestinal hemorrhage.

Materials and methods. This prospective study approved by the ethical committee was performed based at
the Department of Anesthesiology and Resuscitation, Research Institute of Cardiology, Tomsk, in 2012—
2013. It included 30 patients who had previously undergone myocardial revascularization with artificial
circulation. Gastroduodenal complications were predicted based on the results of the general hypoxic test,
monitoring intragastric pH, and determination of endothelial function markers (endothelin-1, nitric oxide
metabolites) intraand postoperatively.

Results. 17 (56.7%) patients with negative results of hypoxic test, intragastric pH-metry, and endothelial dysfunction
in cardiosurgical patients at risk of gastrointestinal hemorrhage.

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monitoring intragastric pH, and determination of endothelial function markers (endothelin-1, nitric oxide
metabolites) intraand postoperatively.

Results. 17 (56.7%) patients with negative results of hypoxic test, were referred to the group at low-risk of
gastrointestinal complications and given no antisecretory therapy. Plasma ET-1 level in the patients with
gastric hemorrhage was almost 10 times that in the absence of complications. Multiple organ insufficiency
was associated with a rise in RT-1 levels by the end of the first postoperative day. High ET-1 levels
suggested the predominance of vasoconstrictive effect that eventually resulted in a break of the vascular wall
and hypoperfusion of gastric mucosa.

Conclusion. High ET-1 levels and disbalance of nitric oxide metabolites in blood are the main predictors of
postoperative complications that characterize the functional state of vascular endothelium and may cause
vascular rupture in case of the atherosclerotic process. The use of hypoxic test and gastric pH-metry in the
preoperative period make it possible to distinguish patients that do not need preventive antisecretory therapy.

**Key words:** endothelial dysfunction; general hypoxic test; intragastric pH-metry; gastrointestinal
hemorrhage; aortocoronary bypass surgery.
The study was designed as a comparative analysis of clinical and anamnestic data and results of morphological studies of surgically obtained tissues from 61 patients with stomach cancer (SC) aged 29—78 yr with (group 1) and without (group 2) signs of connective tissue dysplasia (CTD). The groups had an identical structure of SC hystological types, but in group 1 the tumours were localized mainly in the stomach body (60.6%, p<0.05) and in group 2 in the cardia (32.1%, p<0.05). In group 1, SC was more frequently associated with chronic (sometimes multiple) ulcers outside the tumor (18.2 compared with 7.1% in group 2). Comparative analysis revealed the following features of SC in patients with CTD: predominance of stigmatization signs in the urogenital system (57.6%) and gastrointestinal tract (42.4%), cyst formation in different organs (75.8%) especially in kidneys (48.5%), high frequency of gastric problems in medical history (chronic gastritis, ulcer disease) (72.7 and 35.7% in groups 1 and 2 respectively, p<0.05) and concomitant pathology of urogenital system (42.4%, p<0.05). These peculiarities may be used as the marker for the inclusion of patients in the risk group for SC. Taking into account plastic, morphogenetic, and protective functions of connective tissue under physiological conditions, the above epithelial-stromal relationships and peculiarities of reparative processes in gastric mucosa one can not exclude effect of CTD on gastric cancerogenesis. This implies the necessity of further studies.

K e y w o r d s: stomach cancer; non-differentiated connective tissue dysplasia.