RATIONAL ANTIBACTERIAL THERAPY OF RESPIRATORY DISEASES AMONG ELDERLY PATIENTS

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The respiratory diseases occupy a large proportion within morbidity structure of elderly. This is connected with morphological, structural and functional changes in the respiratory system during aging. The bronchitis, chronic obstructive pulmonary disease, pneumonia and bronchiectasis are more frequently found among elderly patients. Treatment of respiratory tract infections includes antibiotics. The irrational use of antibacterial drugs leads to the development of antibiotic resistance, reduces the effectiveness of treatment and increases the risk of complications.

Aim. Study of the empirical and rational antibiotic therapy in elderly patients with respiratory diseases.

Subjects and Methods. Thirty elderly patients (12 men and 18 women), aged 65 to 76 years old suffering from pneumonia (36 %), COPD exacerbation (52 %) and bronchiectasis (12 %) were examined in the clinic of Internal Medicine of KazNMU named after S. D. Asfendiarov. The clinical picture and polymorbidity of pathology with concomitant diseases of the heart, kidney, liver and diabetes complicated the diagnosis of diseases. Identification of pathogens and determination of their sensitivity were carried out according to the bacteriological seeding of sputum of patients to antibiotics.

Results. The starting antibiotic therapy was carried out generally by a broad spectrum of antibiotics (cephalosporins, beta-lactam drugs, the fluoroquinolones). According to the results of bacteriological sputum analysis, the most frequent pathogens in the elderly were Streptococcus pneumonia, Haemophilus influenza, Streptococcus pyogenes, Klebsiella pneumonia, Pseudomonas aeruginosa, etc. The obtained data allowed reveal the sensitivity of pathogens to antibiotics and prescribe rational and often combined antibacterial therapy. Administration of antibiotics to patients over 65 years was carried out in accordance with the clinical protocol of the Republic of Kazakhstan on the diagnosis and treatment of respiratory diseases (2015).

Conclusion. The respiratory diseases in elderly patients develop in conditions of anatomic lung parenchyma changes and ventilation disturbances. Timely diagnosis of these diseases includes: identification of pathogens and choice of proper antibiotics. Rational antibiotic therapy increases effectiveness of treatment, prevents transition of respiratory diseases into chronic stage and improves life quality of elderly patients.

SELECTION OF ANTIHYPERTENSIVE THERAPY IN GERIATRIC PRACTICE

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Aim. Optimization of the selection of antihypertensive drugs in outpatient practice.

Subjects and Methods. Measurement of blood pressure (BP), daily monitoring of blood pressure, electrocardiogram (ECG), intracranial pressure (ICP), cerebral perfusion pressure (CPP), echoencephalography (EPS), oximetry bullets study lipid profile, psychotherapeutic training — adaptation of older persons to modern living conditions and individual selection of classical music pieces for the spiritual relaxation. The study group included 45 patients aged 65–92 years: 14 women and 15 men aged 65–75 and 9 women and 7 men aged 75–92. Among those examined there were 25 pts with 2nd stage and 20 pts with 3rd stage arterial hypertension (AH), 45 pts with coronary heart disease, 20 pts with myocardial infarction, 30 pts with IIA and 15 with IIB chronic heart failure (II- III NYHA functional class), cerebrovascular diseases: stroke with residual symptoms (20 pts), dyscirculatory encephalopathy (45 pts), chronic obstructive pulmonary disease (COPD, 45 pts), 1st stage respiratory failure (20 pts), and 2nd stage respiratory failure (25 pts). The treatment included beta-blockers, angiotensin converting enzyme inhibitors, calcium channel blockers, alpha-blockers, saluretics, metabolic action medications, statins, cerebroprotectors, anticoagulants and antiplatelet agents, as well as group classes with the psychologist.

Results. In view of effect of monotherapy with a minimum dosage and chronological steps, and with the addition of drugs — adjuvants (basic drugs enhancing effect) in all cases achieved a reduction in the system pressure levels. The target systolic and diastolic blood pressure was achieved more efficiently. The musical repertoire was selected on the basis of intelligence and individual personality traits. The diet restricted in animal and vegetable fats, proteins, refined sugar, and edible salt liquid.

Conclusions. In all cases, the treatment of patients with hypertension must be strictly individually, taking into account the age, the timekeeping, functioning of vital organs etc. Control of antihypertensive therapy included blood pressure measurement, daily monitoring of blood pressure, heart rate, ECG, ICP, CPP, pulse oximetry. Useful lipid profile, clinical examination, patient's visiting the club to communicate with the therapist — a psychologist, trained emergency self-help in the cases of hypertensive crisis.

STRONG CORRELATION OF AGE P16 PROTEIN EXPRESSION DYNAMICS WITH INTENSITY OF BETA AMYLOID AB42 EXPRESSION

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Introduction. Neurodegeneration and cell death in Alzheimer's disease might be associated with aberrant proliferative mechanisms and activation of cell-cycle related events which correlates with the ectopic expression of cell cycle markers. The p16INK4a tumor suppressor is well-known biomarker of senescence. It has been shown to markedly increase with molecular aging in most human tissues. Pathological accumulation of amyloid-beta peptide (Aβ) is considered as a pathological hallmark of Alzheimer's disease and widely used as a biomarker of AD. It has been reported that elevated expression of the p16INK4a in Alzheimer's disease is closely associated with neurofibrillary degeneration while its relationship with amiloid depositions in humans remain elusive.

Aim. To examine the expression level of p16INK4a protein and beta amyloid protein Aβ42 in case of AD.

Subjects and Methods. AD-associated changes in the expression of the p16INK4a and Aβ42 were investigated by immunocytochemistry in the post-mortem human hippocampus of patients with AD and non-Alzheimer age-matched controls. Samples were divided into 3 groups according to patient's age: mature (n = 25), elderly (n = 23) and old (n = 17). The AD cases were classified as ''mild'' AD. The sections were incubated with p16 (1:75, Dako) and Aβ42 (1:125, Novocastra) primary antibodies and thereafter processed for 2 h with the second biotinylated antibody (anti-mouse IgG, Dako). Reactions were visualized with the ABC-complex and 3. 3-diaminobenzidine (Dako). Statistical significance was determined by the Student's *t* test, p values under 0.05 were considered statistically significant.

Results. Levels of the established AD biomarker Aβ42 were markedly increased in AD patients (P = 0.01). Increases in both p16INK4a (P = 0.01) and Aβ42 (P = 0.01) were age-dependent. Increasing levels of the senescence-associated biomarker p16INK4a positively correlated with AD biomarker Aβ42 (P = 0.01) in all age groups. The correlation coefficient between p16INK4a and Aβ42 was 1, suggesting very strong correlation.

Conclusion. We have explored the relationships between p16INK4a and Aβ42. The obtained results demonstrate that increase in p16 expression level strongly correlates with the intensity of expression of the Aβ42 in case of AD.

RELATIONSHIP ETIOLOGY AND CLINICAL MANIFESTATIONS OF CHRONIC KIDNEY DISEASE WITH AGING

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Background. Chronic Kidney Disease (CKD) is observed in 5–10 % population worldwide. The rate of patients with CKD increasing is 5 times higher than the natural population growth. CKD is a disease that lasts more than 3 months.

The goal — to assess whether the etiology factors for CKD influence on its clinical manifestations and answer in form: yes/no.

Materials and methods. 99 patients with CKD history (male — 33, female — 66), age 52.84 ± 20.68 years were examined. General clinical examination along with complete blood count, urinalysis, determination of