**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