Recently doctors have paid more and more attention to the problem of early diagnosis of subclinical forms of endocrinological diseases. One of such problems is early diagnosis of subclinical Cushing syndrome (CS).

Cushing syndrome means a clinical syndrome caused by lasting glucocorticoids hypersecretion. Clinical manifestation of hypercorticism syndrome results from the presence of glucocorticoids receptors in different target-organs. It includes numerous symptoms which can be divided into specific ones and less specific ones. Specific symptoms include definitive changes in skin (red and violet striae, dryness, petechial and widespread hemorrhages and folliculitis), proximal myopathy and plethora. But according to the range of publications one should consider the possibility of hypercorticism presence without specific clinical symptoms. At least two thirds of patients with CS have osteoporosis and the manifestations of metabolic syndrome. The prevalence rate of subclinical hypercorticism among patients with arterial hypertension is 0.5-2%. The detection and elimination of hypercorticism as a causative factor of arterial hypertension result, as a rule, in the decrease in arterial tension of 75% of patients after several weeks or a year. According to different researches the prevalence rate of CS among the patients with uncontrolled diabetes is 1-9.4%. Patients have "cushingoid" type of diabetes being formed. However, in case of subclinical hypercorticism there may be the absence of the specific body fat distribution. According to different researchers the prevalence rate of subclinical hypercorticism among patients with obesity may be 8.7%. The osteoporosis intensity in case of CS depends on the hypercorticism duration and often (in 25-50% of patients) comes with pathological fractures (as a rule, compression) of vertebral bodies. According to I. Chiodini and his co-authors' research 10.8% of patients with symptom-free vertebral fractures are diagnosed with subclinical CS.

The detection of the states mentioned above shall determine diagnostic focus of the doctor in any area. Diabetes mellitus of the second type and other carbohydrate metabolism disorder, arterial hypertension, obesity and osteoporosis may be the consequences of the chronic little cortisol surplus, however, the

connection between these states and subclinical cortisol hypersecretion is not expressly proven [19]. The intensity of clinical symptoms is likely to be connected with the intensity of cortisol hypersecretion [20].

Thus, arterial hypertension, osteoporosis, obesity and carbohydrate metabolism disorder should be the most alarming symptoms as for the excluding subclinical hypercorticism. Multidisciplinary approach, i.e. the participation of the specialists in different areas, is necessary for early hypercorticism diagnosis.

Laboratory diagnosis becomes primary in the diagnosis of subclinical CS.

In accordance with the international recommendations "The diagnosis of Cushing's syndrome: an Endocrine Society clinical practice guideline" 1-mg dexamethasone suppressive test, the detection of daily excretion of cortisol with urine and night detection of cortisol in saliva are used for the CS diagnosis.

Night suppressive test with 1-mg dexamethasone is based on the suppression of ACTH with the subsequent decrease in cortisol secretion. The ambulatory conducting of this examination is possible without patient needing preliminary preparation. The level of cortisol in blood less than 1.8 mcg/dl (50nmol/l) allows excluding patient's hypercorticism. Sensitivity and specificity of 1-mg dexamethasone suppressive probe using minimum limit for cortisol of 1.8 mcg/dl (50 nmol/l) are 75-100% and 72-82% accordingly. The detection of cortisol in daily urine also has rather high sensitivity and specificity. Considering the possibility of the result of cortisol within referential values in 9% of patients in case of a single examination of daily urine, such examination should be conducted twice.

The night detection of cortisol in saliva that reflects the concentration of free (not connected with proteins) and excludes the impact of circadian rhythm of cortisol on the result is the most valuable test for hypercorticism detection. The amount of cortisol in saliva does not depend on the saliva volume and is thermally stable at indoor temperature. The advantages of the detection of cortisol in saliva include: painlessness and noninvasiveness of the methodology, the absence of

necessity of hospitalization, participation of middle medical staff and pharmacological interference.

Thus, considering the possibility of the subclinical CS diagnosis as causative factor in patients with widespread in the population arterial hypertension, obesity, carbohydrate metabolism disorder and osteoporosis, such patients are subject to examination for cortisol hypersecretion detection. Modern laboratory researches (saliva cortisol, daily urine cortisol) unveil the opportunities for early subclinical CS diagnosis before the development of symptomatic clinical picture.