Results: Patients affected by congestive heart failure (CHF) have high plasmatic levels of Arginine vasopressin even though they are hypervolemic with lower plasma osmolarity and serum sodium levels and this happens because of the lower effective of arterial blood volume, decreased cardiac output and Angiotensin II-induced AVP release. Arginine vasopressin exerts adverse effects in CHF by increasing vascular peripheric resistance via V1a Receptors and by enhancing water retention through V2 Receptors from renal collecting tubules. Furthermore, sustained stimulation of V1aR in the heart can lead to remodeling by stimulating cell hypertrophy and further deteriorates cardiac function. Therefore, blockade of the AVP system may prove as a useful adjunct or alternative tostandard therapy in CHF. Currently there are 4 major compounds which are AVP-antagonists, 3 of them are selective antagonists of V2R: Tolvaptan, Satavaptan and Lixivaptan and 1 is a nonselective antagonist of V1aR and V2R: Conivaptan. Only Conivaptan and Tolvaptan are approved by FDA, the first one for treating hypervolemic and euvolemic hyponatremia and the second one for the treatment of CHF, liver cirrhosis and SIADH (syndrome of inappropriate antidiuretic hormone secretion).

Conclusion: According to the results of the clinical trials that were mentioned above, this new class of medicines is efficient in short-term regulation of hyponatremia and hypervolemia in congestive heart failure and may be used as an alternative for patients with resistance to diuretics. Long-term efficiency wasn't demonstrated and there are many questions that have to be elucidated regarding to this class of drugs.

Keywords: Arginine vasopressin, vaptans, congestive heart failure.

6. MICROSCOPIC CHANGES IN BLOOD CAPILLARIES IN HEMORRHAGIC VASCULITIS AND THE CORRELATION WITH THE DEGREE OF EXPRESSION OF IMMUNE REACTIONS

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Introduction: Henoch-Schoenlein Purpura is the most frequent vasculitis in pediatric patients usually with a self-limiting evolution. Still the evolution of the disease is hardly predictable with a possibility to acquire a severe clinical form. This paper had the goal to highlight the possible correlation between the severity of the degree of the histopathological lesions and the expression of markers of endothelial status and cellular and humoral immune status. Other researches with similar purpose were performed, but the analysis of the literature has shown that the results are contradictory.

Materials and Methods: To reach the goal, we have performed histopathological diagnosis and analysis of skin biopsies and we have evaluated the endothelial status, cellular immune status and humoral immune status.

Results: We founded a significant correlation between the degree of implication of microcirculation and the level of markers of the endothelial status.

Conclusions: The markers of the endothelial activation can be an alternative method in evaluation of the severity of disease and therefore of the therapeutical strategy, still more researches are necessary.

Keywords: Henoch-Schonlein Purpura, histopathology, endothelial markers, VCAM, ECAM.

7. METABOLIC CHANGES IN POLYCYSTIC OVARIAN SYNDROME

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Introduction: Polycystic ovary syndrome (PCOS) is a heterogeneous multifactorial disease characterized by menstrual disorders, chronic anovulation, hyperandrogenism, cystic changes in the ovaries and infertility. The syndrome is a condition with prepubertal onset, affecting especially women of childbearing age.

Objectives of the study were to elucidate the main etiopathogenic mechanisms, the criteria for diagnosis of metabolic changes and the most common complications in PCOS.

Materials and Methods: Relevant scientific articles regarding PCOS from medical databases were analyzed.

Results: The frequency of PCOS is estimated at 0.6-11% among gynecological diseases. PCOS is found in 1.5-20% women of childbearing age, 50-75% – with anovulatory infertility and 30-40% – with amenorrhea. Etiopathogenesis of PCOS remains unknown despite multiple studies. Decreased peripheral insulin sensitivity and consequently hyperinsulinemia are considered primary factors in the pathogenesis of PCOS. Insulin resistance and hyperinsulinemia are largely found laboratory symptoms of PCOS, insulin resistance being indentified in 25% of middle-aged pacients. Thyroid disorders also are frecuently accompaning PCOS, highlightening the link between PCOS and autoimmune thyroiditis, rising concern that female hormones may play a role in triggering these diseases. Of all cases of thyroid pathology there were an increased frequency of cases of goiter (49.2%) and autoimmune thyroiditis (41.3%). Metabolic manifestations of hyperandrogenism were identified in PCOS: 42.8% of the patients had increased levels of plasma testosterone with normal urine excretion of 17-CS, 28.6% – the increase in both plasma testosterone as well as 17-CS excretion. In 14.3% of patients ovarian hyperandrogenia genesis was demonstrated only by applying the test with dexamethasone and chorionic gonadotropin, while in 9.5% of patients hyperandrogenia could not be demonstrated by hormone investigations. In 30% of cases PCOS was accompaned by secondary hyperprolactinemia.

Conclusion: Based on available literature data polycystic ovarian syndrome may be defined by the presence of hyperandrogenic (clinical and/or biochemical) and ovarian (oligo-, anovulation and/or polycystic ovaries) disorders. The main metabolic symptoms of PCOS are hyperandrogenism, hyperinsulinemia with insulin resistance, hypo- and hyperthyroidism and secondary hyperprolactinemia. Most common complications are impaired glucose tolerance and type II diabetes, cardiovascular disorders (dyslipidemia, hypertension, coronary heart disease) and risk of abortion or premature birth.

Key words: Polycystic ovarian syndrome, hyperandrogenism, hyperinsulinemia, insulin resistance, hypothyroidism, hyperthyroidism, secondary hyperprolactinemia

8. THE CLINICAL ANATAMOMY OF HEART. THE CORD RAPPORT WITH BACK MUSCLES AND COLUMN SPINE

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Introduction: The heart is the engine of the body, being one of the main organs of the human body, placed in the median region of thorax. The heart is placed in the centre of the circulatory system, being a muscular organ which pumps blood in the human body. The circulatory system consists of arteries, veins and capillaries, which carry the blood from and to body regions.

Purpose and Objectives: To understand the great importance of the heart at clinical level and to apply the topographic anatomical knowledge about the vascularization and innervation of the heart and the influence of some muscule formation on the heart.

Results: The heart is the central organ of the cardiovascular system. It is situated in the mediastinum and has a triangular pyramid or a flattened cone shape, placed on the diaphragm. The heart axis is directed obliquely downward, toward the left. The heart wall is made of 3 layers, each one consisting of some nervo-vascular formations. They are of great importance. Arterial vascularization is provided by the coronary arteries, which originate in the right and left aortic sinuses. The big coronary arteries run on the surface of the the heart and give subendocardial branches. The irigation of the heart is made in diastole. The coronary arteries are classified as "end circulation", with little anostomoses between branches. The heart vascularization scheme: The right coronary artery: the inferior and posterior wall of the left ventricle, 1/2 posterior of the septum, the side wall of the right ventricle. Circumflex artery: the side wall of the the left