



TURKEY, IZMIR

**THE FIRST INTERNATIONAL SCIENTIFIC – PRACTICAL VIRTUAL
CONFERENCE "CLINICAL ENDOCRINOLOGY AND ENDOCRINE SYSTEM
DISEASE: PROGNOSIS, ACHIEVEMENT AND CHALLENGES."**

CONFERENCE PROCEEDINGS

AZERBAIJAN-ESTONIA-GEORGIA-TURKEY

TURKEY, IZMIR FEBRUARY 05-06, 2021

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PROGRAM AT A GLANCE

AZERBAIJAN ESTONIA GEORGIA TURKEY

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First day	05 February 2021
Moderators	Elmira Aliyeva, Aytan Huseynova
Opening ceremony	Aytan Huseynova, Namig Isazade
19.00-19.30	Rafiq Mammadhasanov AMU, Head of the Department of Internal Medicine II. Doctor of Medicine. Professor.
	Davit Tophuria Tbilisi State Medical University. Associate Professor.
	Elmira Aliyeva AMU, Head of the Department of Obstetrics and Gynecology I. Doctor of Medicine. Professor.
	Mariam Darbaidze David Aghmashenebeli National Defence Academy of Georgia. Georgian National University SEU. Alterbridge-International University of Management and Communication. Vice rector. Professor of Medicine faculty. PhD in Biology.
19.30-19.50	Нигяр Камилова AMU, I кафедра акушерства и гинекологии, д.м.н., профессор. Современное представление о гормональном балансе у женщин в различных возрастных группах.
19.50-20.10	Ека Patsatsia, Marina Gordeladze, Besik Kochlamazashili, Associate professor, Tbilisi State Medical University. Meconium iodine measurement of iodine in meconium as additional method of iodine deficiency evaluation.
20.10-20.30	Ketevan Khitarishvili TSMU, Endocrinology Department, Assistant Professor. Covid-19 Pandemic: Further Implications for Diabetics and Obesity Care.
20.30-20.40	Coffee brake
	Reproductive Endocrinology and infertility
20.40-21.00	Ильхам Кафаров Бакинская городская клиническая больница №1, Директор, к.м.н. Гормональные механизмы патогенеза генитального пролапса.
21.00-21.20	Саадет Сафарова AMU, I кафедра акушерства и гинекологии, д.ф.м, доцент. Преждевременная недостаточность яичников: анализ современных подходов к лечению
21.20-21.40	Natəvan Axundova ATU, Məməliq və ginekologiya I kafedrası., t.ü.f.d., dosent. Reproduktiv dövrdə hiperandrojeniya sindromu olan qadınlarda hormonal dəyişikliklərin xüsusiyyətləri.
21.40-22.00	Нармина Алиева AMU, I кафедра акушерства и гинекологии, ст. лаборант. Гиперандрогения как проблема бесплодия.
	Osteoporosis and Bone Health
22.00-22.20	Sain Safarova AMU, Endocrinologist, associate professor, Department of Internal Medicine II, Impact of diabetes mellitus on bone metabolism: bone remodeling markers and their relationship with bone mineral density.
	Pituitary and Neuroendocrinology
22.20-22.40	Aynur Rzayeva ATU, Məməliq və ginekologiya I kafedrası, baş laborant. Hiperprolaktinemiya olan pubertat və reproduktiv dövrdə olan qız və qadınlarda qalxanabənzər vəzinin patologiyasının xüsusiyyətləri.

Second day	06 February 2021
Moderators	Elmira Aliyeva, Aytan Huseynova
	Diabetes mellitus and complications
16.00-16.20	Könül İsmaylova ATU, Daxili xəstəliklər II kafedrası, endokrinoloq, assistent İnsuline rezistentlik fonunda dəmir metabolozminin bəzi xüsusiyyətləri.
	Reproductive Endocrinology and infertility
16.20-16.40	Сабина Машадиева AMU, кафедра внутренних болезней II, эндокринолог, доцент Новый взгляд на лечение синдрома поликистозных яичников
16.40-17.00	Günay Həsənli ATU, Mamalıq və ginekologiya I kafedrası, baş laborant. Erkən reproduktiv dövrdə yeniyetmə və gənc qızlarda ümumi (hipoqonadotrop hipoqonadizm) və genital (hiperqonadotrop hipoqonadizm) infantilizmin rastgəlmə tezliyi.
17.00-17.20	Aidə Talibli Azərbaycan Tibb Universiteti, I mamalıq və ginekologiya kafedrası. Cinsi yetişkənlik dövründə hiperandrojeniya sindromu olan qızlarda vitamin D və karbohidrat mubadiləsinin dəyişmə xüsusiyyətləri.
17.20-17.40	Vüsalə Rəhimova ATU, Mamalıq və ginekologiya I kafedrası, baş laborant. Postmenopauzal dövrdə piylənmə və hiperandrojeniya olan qadınlarda hormonal,metibolik və reproduktiv orqanların exoqrafik gostericiləri.
	Pituitary and Neuroendocrinology
17.40-18.00	Namiq Əhmədov ATU, Neyrocərrahiyyə kafedrası, assistent. Hormonal aktiv hipofiz adenomlarının cərrahi mualicəsinə neyroendokrin statusun təsiri.
	Obesity and Metabolism
18.00-18.20	Aytakin Hasanova AMU, Department of Medical Biology and Genetics. Endocrine and metabolic features in turner syndrome.
18.20-18.40	Hidayat Mammadzade Baku Medical Plaza Clinic endocrinologist, Head of the Department of Endocrinology.
	Thyroid Disorder
18.40-19.00	Candan Varol Diyetisyen doctor Tiroid hastalıklarında beslenme.
19.00-19.20	Mehmet Doruk Doctor DR Tiroid hastalıklarında Ultrasonografi biyopsi
	Obesity and Metabolism
19.20-19.40	Hayrullah Derici Professor, MD. Izmir Ekol Hastanesi.Genel Cerrah. Obezite ve Metabolizma.
	Diabetes mellitus and cutaneous manifestations
19.40-20.00	Melis Gönülal Dermatoloji Uzmanı. Diabetli hastalarda cilt sorunları.
20.00-20.20	Erdal Duman Endokrinoloji ve Metabolizma Hastalıkları Uzmanı. Doctor. Diyabet ve İnsülin.
20.20-20.40	Doga Peksever Diyetisyen doktor Diyabet tedavisinde karbonhidrat Sayımı.
	Obesity and Metabolism
20.40-21.00	Mehmet Doruk Assoc. Dr., Internal medicine.



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	Endocrinology and metabolic disease.
21.00-21.20	Doga Peksever, Diyetisyen doktor Diyabet tedavisinde karbonhidrat Sayımı.
21.20-21.40	Gülay Oztürk, Doctor. Diyabette ayak bakımı.
21.40-22.00	Gülsüm Hüseynova, Pediatri - diyetoloq Qidalanma xüsusiyyətlərinin bətdaxili inkişafa təsiri Академия питания, диетологии и профилактики ожирения. ANDOP (Азербайджан)
Closing ceremony	

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MECONIUM IODINE MEASUREMENT OF IODINE IN MECONIUM AS ADDITIONAL METHOD OF IODINE DEFICIENCY EVALUATION

Marina Gordeladze, Besik Kochlamazashili, Eka Patsatsia

Tbilisi State Medical University.

Objectives: The aim of the present work was to study health condition and course of the adaptation period in infants born to mothers with euthyroid goiter and mild iodine deficiency.

Methods: in total 107 newborns (nts) and their mothers were enrolled in the study. The nts were divided into 2 groups (Gr) Gr.1 - 79 nts, whose mothers had euthyroid augmentation of thyroid gland (TG) of 1st and 2nd degree, not receiving iodine supplementation; Gr2 – 28 nts, whose mothers were receiving iodine supplementation and had no augmented TG. Concentrations of serum TSH on day 4 – 5 of nts life, iodine in meconium and mothers' milk were determined.

Results: In Gr.1 nts mean TSH levels were 12.1 ± 1.0 m U/l, besides, these levels were higher in nts born to mothers with 2nd degree goiter (14.1 ± 1.0 m U/l, $p < 0.05$); in Gr.2 TSH levels were within the normal range (2.8 ± 0.3 m U/l, $p < 0.05$).

Iodine levels in milk of mothers with augmented TG were 5.0 ± 0.3 mg/dl, while in mothers of Gr.2 nts they were 13.6 ± 0.31 mg/dl ($p < 0.05$).

Iodine Mediane in breast milk for Gr.2 was higher than that for Gr.1 (7.1 mg/dl vs. 4.6 mg/dl, $p < 0.05$).

In Gr.1 nts meconium iodine levels were 53.0 ± 10 ng/g, and in Gr.2 – 120.8 ± 8.01 Ng/g ($p < 0.05$). Correlation between serum TSH of nts and iodine in meconium was revealed. Iodine indices in meconium of nts born to mothers with 2nd degree goiter were the lowest, While serum TSH levels were highest ($r \pm 0.51$, $p < 0.05$). Indices of iodine in meconium of 80 ng/g to 180 ng/g were considered as normal, while indices < 80 ng/g were assumed as iodine deficiency. These nts were considered having high risk of hypothyreosis development at an older age. Fifty–six out of the there nts, had high serum TSH and were born to 56 mothers with iodine deficiency and augmented TG, mostly of 2nd degree, and 18 nts were born in 23 mothers with 1st degree goiter.

CONCLUSIONS

1. Iodine concentration in meconium directly correlates with mothers' TG augmentation degree and iodine levels in breast milk, and with TSH levels in nts blood serum. Thus, measurement of iodine levels in meconium at early neonated period is informative, as meconium iodine concentration is a retrospective and integral index of iodine metabolism.

2. Breast milk iodine concentration is the most evident index of iodine balance. It is inversely correlated with TG augment in mothers.

DEFICIENCY OF VITAMIN D IN VARIOUS ENDOCRINOPATHIES DURING A COVID PANDEMIC

Tariverdiyeva R.R., Khappalayeva K.S.

Azerbaijan Medical University.

Hypovitaminosis of vitamin D continues to occupy a leading position in the world among vitamin deficiencies. It occurs in about 50% of the world's population, regardless of age and ethnicity.

A large number of studies in recent years have been devoted to the study of its extraosseous effects and the role of vitamin D and its deficiency in the development and progression of chronic non-infection diseases, affecting almost all organs and systems of the human body. In connection with the COVID-19 pandemic, the international medical community is studying the relationship between vitamin D deficiency and the frequency of positive tests for COVID-19; an increase in the incidence rate is shown by almost 2 times compared with patients without deficiency, while some studies indicate that there is no correlation between the severity of the disease and the level of vitamin D, others, shows increase in mortality with patients with vitamin D deficiency by 18%. The target concentration of vitamin D in blood - from 30 ng / ml 21-29 ng / ml is considered as vitamin D deficiency, at a level less than 20 ng / ml, a diagnosis of vitamin D deficiency. The recommended use of at least 600 IU of vitamin D for the general population of apparently healthy individuals 18-50 years old was determined by the US Institute of Medicine, and approved by most international clinical guidelines to achieve 25 (OH) D levels above 20 ng / ml in 97% of individuals in this age group. The therapeutic dose for vitamin D deficiency is 2000 IU / day of

cholecalciferol (**D3**), with proven vitamin D deficiency - from 3000 IU per day of vitamin D3. Protocols of different countries may recommend taking vitamin D from 600 IU to 10,000 IU. per day for the treatment and prevention of coronavirus infection.

Purpose of the work: to assess the course of COVID infection in various endocrinopathies (diabetes mellitus, hypothyroidism, obesity) in combination with vitamin D deficiency. **Materials and Methods:** 49 patients tested positive for COVID-19 from April to November 2020, there were indications in history of hypothyroidism (13 patients), diabetes (29 patients) and obesity (11 patients). Patient age from 34 to 77, of these 19 are men and 30 are women. All patients, in addition to general clinical indicators to were determined the level of vitamin D in the blood. **results of the study:** Vitamin D deficiency was detected in 21 (43%) patients (mean concentration 23.2 ± 1.5 ng / ml), vitamin D deficiency was in 27 (55%) patients (mean concentration 13.9 ± 5.1 ng / ml), in 1 (2%) patient, the level of vitamin D was within normal limits. At the same time, in patients with obesity and vitamin D deficiency, coronavirus infection was more severe (Volume of lung tissue lesions by CT ranged from 15 to 25%, 96-98% saturation), than patients with hypothyroidism (TSH from 7.1 to 23 mIU / mL) and deficient vit D. In patients with vitamin D deficiency, the symptoms of coronavirus infection were not pronounced, only 6 of them had specific changes on CT of the lungs, while the saturation was 98-99%. Patients with normal levels of vitamin D have suffered long-term type 2 diabetes, in connection with coronavirus infection decompensated underlying disease, which caused a relatively severe course (saturation -96%, the volume of lung tissue damage -20%). All patients, in addition to treating a coronavirus infection, depending on the severity of the condition and the correction of major diseases (hypoglycemic, thyroid therapy) Cholecalciferol was assigned depending on the degree of deficiency of Vitamin D 2,000 to 5,000 IU per day. After 2 months, a repeated determination of the concentration of 25 (OH) D in the blood serum was carried out; the normalization of the level of vitamin D was observed in 16 patients. Taking into account the results of the study recommended to continue taking the drug for 3 months with a further control of the level of vitamin D in the blood over time.

CONCLUSION

The role of vitamin D deficiency and its correction in the prevention and treatment of COVID-19 is still being studied. The rationale for the use of vitamin D is largely based on its immunomodulatory effects, which may potentially protect against infection COVID-19 or reduce the severity of disease. Big role in current weighting coronavirus infection plays age and comorbidities, especially diabetes and obesity, especially when combined with a deficiency of vitamin D.

HYPERPROLACTINEMIA AND INFERTILITY

¹Jeyran Pashayeva, ²Elmira Aliyeva, ³Samira Hasanova, ⁴Aynur Rzayeva

¹PhD, ass., Department of Obstetrics and Gynecology I, AMU,

²MD, prof., Head of the Department of Obstetrics and Gynecology I, AMU,

³PhD, ass., Department of Obstetrics and Gynecology I, AMU,

⁴Senior lab., Department of Obstetrics and Gynecology I, AMU

Hyperprolactinemia is one of the most common symptoms of pituitary gland pathology. This pathology is accompanied by prolactinomas (60%), infertility (40%), galactorrhea, and metabolic disorders (65%) (1). Dopamine agonists are the Gold Standard treatment. At the same time, Dostinex proves to be most effective in terms of prolactin level and tumor reduction (2).

The purpose of the research: Study infertility in the presence of hyperprolactinemia.

Clinical case: A woman, 24 years old, had a history of infertility for four years. At the first visit, she complained of galactorrhea, menstrual irregularities, decreased libido, and hypertrichosis. During the ultrasound examination, polycystic ovary disease and anovulation were found. The patency of the fallopian tubes was also checked. The tubes are passable from both sides. She was examined for hormone levels and a complete blood count. The TSH level was within the normal range, the level of free testosterone was increased by 15%, the prolactin level was 191,4 ng/mL (norm 2-29 ng/mL), seven times higher than the norm. The patient was requested to do an MRI examination, in which a microadenoma 7×10 mm in size was found. A consultation with a neurosurgeon was held, as a result, Dostinex was prescribed. The prolactin level gradually returned to normal. After 40 days, MRI showed a decrease in the size of the adenoma to 4×7 mm. A year later, the patient became pregnant; thus, Dostinex was canceled. The pregnancy was proceeding without complications. The woman had a son, at 38 weeks of pregnancy, weighing 2500 g. After giving birth, the woman continued to take Dostinex. Two years later, the woman became pregnant for a second time. She is currently 12 weeks pregnant. We carried out an ultrasound scan, blood tests, urine tests, and hormone levels tests. Results are within the normal range (prolactin level



121.0 ng/mL). On ultrasound, the condition of the fetus was satisfactory, no deviations were seen. With the approval of the neurosurgeon, it was decided to continue the pregnancy under close supervision.

CONCLUSION

It should be recalled that hyperprolactinemia is one of the most common causes of menstrual irregularities and infertility. Therefore, the evaluation of the prolactin level in the blood is an obligatory component of the examination process in patients with oligomenorrhea, amenorrhea, or infertility.

IMPACT OF TYPE 2 DIABETES MELLITUS ON BONE METABOLISM: BONE REMODELING MARKERS AND THEIR RELATIONSHIP WITH BONE MINERAL DENSITY

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INTRODUCTION

Bone complications of diabetes mellitus (DM) are of high medical and social significance, due to the prevalence of the risk of osteoporotic fractures, a decrease in the quality of life of patients, and an increase in disability and mortality [1]. According to research data, the risk of hip fracture in DM compared with healthy individuals is increased by 6.9 times in type 1 and by 1.7 times in type 2 diabetes mellitus [2]. In addition, the presence of type 2 diabetes mellitus (T2DM) is an independent risk factor for the development of vertebral fractures after adjusting for age, body mass index, and spinal bone mineral density (BMD) [3]. Thus, the decrease in bone strength due to diabetes mellitus is mainly caused by the deterioration of bone quality, and not by a decrease in BMD, therefore, the measurement of BMD in patients with diabetes may be less informative than for patients without diabetes [4]. Accordingly, the study of the pathophysiology of bone metabolism, the level of bone metabolism markers in patients with diabetes mellitus provides broad prospects in understanding the mechanisms of osteoporosis development as a complication of diabetes mellitus, selection of targeted therapy and improvement of early diagnosis of the disease.

Aim: To analyze the relationship between serum markers of bone remodeling and bone mineral density (BMD) in men and women with type 2 diabetes mellitus.

Materials and methods: A cross-sectional study of 137 patients diagnosed with T2DM (58.4 ± 0.9 years) was carried out on the basis of a therapeutic clinic at AMU; the control group consisted of 82 persons (55.97 ± 0.9 years) matched in age and sex. Determined: aminoterminal procollagen type I propeptide (PINP), C-terminal type I collagen telopeptide (b-CTX), alkaline phosphatase (ALP), parathyroid hormone (PTH), vitamin D (25(OH)D3) using the Cobas ELISA analyzer with kits "Roche Diagnostics", total ionized calcium (Ca²⁺), inorganic phosphorus (P), magnesium (Mg), glucose, HbA1c, creatinine and albumin in blood serum, on an automatic biochemical analyzer HUMALYZER, 2000. Bone mineral density (BMD) was measured by the T-score in the lumbar area (L1-L4) and femoral neck using dual-energy X-ray absorptiometry (DXA). Statistical analysis was performed using the Statistical software (StatSoft 8.0). The analysis of the degree of relationship between the variables was carried out through the calculation of Spearman's rank correlation coefficient. Values were considered statistically significant at p < 0.05.

Results and discussion: Analysis of the data showed that in both women and men with T2DM, a relative increase in β-CTX levels had a negative association with BMD at all sites (p = -0.012). It was revealed that women with a higher b-CTX level have a lower BMD of the femoral neck in the first five years of menopause (p = -0.004). In premenopausal women and older postmenopausal women, the b-CTX resorption marker is less associated with bone loss at all sites (p < 0.05). After men were separated by age < 50 years and ≥ 50 years, there was a negative correlation between b-CTX and BMD in the lumbar spine in men < 50 years old, but there was no correlation between β-CTX and BMD of the femoral neck in men < 50 years old.

In general, in patients with T2DM, relatively high PINP values were positively associated with BMD in both studied regions (p = 0.023). However, when men were divided into subgroups < 50 years and ≥ 50 years, men aged < 50 years with relatively

higher P1NP values showed a negative association with BMD in the lumbar spine ($p = -0.018$). When women were divided into subgroups of the pre- and postmenopausal period, the results differed between the two groups. In premenopausal women, on the other hand, with relatively higher P1NP values, a weak positive correlation with BMD values in the lumbar spine was revealed ($p = 0.03$). In postmenopausal women, the results were similar to those in the total T2DM group. ALP values did not significantly correlate with BMD in all measured areas. The analysis also showed that vitamin D plays a pleiotropic role in bone metabolism as it correlates with both P1NP and β -CTX. In addition, the analysis showed a positive relationship between relatively elevated PTH levels and the bone resorption marker β -CTX.

According to the results of the study, when analyzing the relationship between markers of bone remodeling and BMD in patients with T2DM, the division of patients into subgroups: women for the pre- and postmenopausal period, and men for <50 and ≥ 50 years is practically more informative. In particular, the results were clearly different between the subgroups. Patients with T2DM had relatively lower P1NP and β -CTX values, reflecting lower bone metabolism compared to the controls.

CONCLUSION

In men with T2DM <50 years, serum P1NP and β -CTX levels negatively correlated with L1-L4 BMD values. In premenopausal women, serum P1NP and β -CTX levels negatively correlated with femoral neck BMD values. Bone loss in most diabetic patients is associated with altered bone formation and, to a much lesser extent, with bone resorption.

ЖИДКОСТЬ В МАЛОМ ТАЗУ ОДНА ИЗ МАСОК НЕДИАГНОСТИ- РОВАННОГО ГИПОТИРЕОЗА. КЛИНИЧЕСКИЙ СЛУЧАЙ

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Актуальность: Гипотиреоз – это клинический синдром, вызванный дефицитом тироксина и последующим недостаточным воздействием трийодтирони- на в клетках организма. Является одним из наиболее часто встречаемых заболеваний щитовидной железы. Встречается примерно у 4,5% людей, с возрастом частота патологии увеличивается. У женщин старше 60 лет признаки гипотиреоза регистрируются у 20% из них. Частота субклинических форм заболевания составляет 10-12% (1; 2). Так как заболевание развивается постепенно в течение нескольких лет, многие люди принимают их за признаки естественного старения. Полиморфизм клинических проявлений гипотиреоза, медленное развитие и прогрессирование нередко приводят к поздней диагностике.

Цель: Выявление «замаскированных» симптомов гипотиреоза, помогающих ранней диагностике заболевания.

Материалы и методы: Пациентка Г.И., 53 лет обратилась в Терапевтическую клинику 07.11.2019 года с жалобами на усталость, легкое жжение при мочеиспускании. Вес пациентки 77 кг, рост 170 см. Артериальное давление 180/100 мм рт.ст. Пульс 76 ударов в минуту. До обращения в нашу клинику пациентка прошла ультразвуковое исследование мочеполовой системы и прошла консультацию акушера-гинеколога.

Результаты исследования: УЗИ органов малого таза до лечения: мочевого пузыря - ёмкость до 150 мл, стенка и слизистая не утолщены, правая почка 115x54 мм, норма, левая почка 117x55 мм, киста н/с с деформацией чашек размером 32 мм. При ЦДК кровоток почек сохранен. Эхогенность паренхимы почек не изменена. ЧЛС не расширена. Конкрементов в ЧЛС, проксимальной и дистальной трети мочеточников не выявлено. Надпочечники – норма. Кзади от матки – ограниченное жидкостное образование 36x23x30 мм.

Выводы: Одним из проявлений полисерозита при гипотиреозе является выпот в дугласово пространство. Порой может быть единственным проявлением болезни.

У врачей общей практики, акушера-гинекологов, кардиологов, ревматологов, эндокринологов должна существовать настороженность в отношении гипотиреоза у пациентов с различными серозитами даже при отсутствии характерных проявлений болезни.

Ключевые слова: гипотиреоз, полисерозит



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НОВЫЙ ВЗГЛЯД НА ЛЕЧЕНИЕ СИНДРОМА ПОЛИКИСТОЗНЫХ ЯИЧНИКОВ

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В настоящее время в мире у 40-50% женщин, страдающих бесплодием, диагностируются эндокринные причины. Одной из основных причин женского бесплодия является синдром поликистозных яичников (СПКЯ). У 5-10% женщин репродуктивного возраста диагностируется это заболевание. В последнее время отношение к заболеванию полностью изменилось. В настоящее время эта болезнь уже не просто гинекологическая проблема, а мультисистемное эндокринное заболевание, сопровождающееся широким спектром клинических симптомов. СПКЯ в репродуктивном возрасте сопровождается гиперандрогенией, дислипидемией, снижением чувствительности к инсулину периферических тканей (1). К поздним осложнениям этого синдрома относятся также сахарный диабет второго типа и ишемическая болезнь сердца (2; 3). Ожирение при СПКЯ нужно принимать как высокий фактор риска развития нарушения углеводного обмена (4). По результатам исследований, проводимым в США, распространенность сахарного диабета 2 типа среди женщин с поликистозом яичников в репродуктивном возрасте составляет 7,5%, а нарушения толерантности к глюкозе составляет 31,1%. Эти же данные среди практически здоровых женщин репродуктивного возраста составляют 1% и 7,8% соответственно (4). Таким образом, СПКЯ клинический синдром, характеризующийся бесплодием, умеренным ожирением, нерегулярным менструальным циклом или аменореей, симптомами гиперандрогении (гирсутизм, акне).
Ключевые слова: мио-инозитол, синдром поликистозных яичников, инсулинорезистентность

SIMILAR FEATURES OF TWO VARIOUS DISEASES. CASE REPORT.

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ABSTRACT

COVID-19 pneumonia manifests with chest CT imaging abnormalities, bilateral, subpleural, ground-glass opacities with air bronchograms. Different radiological patterns are observed at different times throughout the disease course. Diffuse bilateral ground-glass opacities co-exist or progresses with consolidations and fibrosis. Evaluation of imaging features, clinical and laboratory findings could to diagnosis of COVID-19 pneumonia and assessment of prognostic values.

We presented cases to analyse the chest CT imaging features in patients with COVID-19 pneumonia, to compare the imaging and laboratory data to across the disease course and to other severe infection, like pneumocyst pneumonia.

Conclusion: Evaluation of blood tests and comparison of clinical data made it possible to diagnose a similare in the course of and CT findings, but an absolutely different disease. This comparison allow distinguish similar characteristics of different diseases and make prognostic conclusions during the course and treatment.

Keywords: Covid-19, HIV, Respiratory distress-syndrom

AMENOREYALI QADINLARDA ERKƏN REPRODUKTİV DÖVRDƏ HORMONAL TƏDQIQATIN DƏYİŞMƏ XÜSUSİYYƏTLƏTİ

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Qadının aybaşı tsiklinin normal olması onun reproduktiv sağlamlığının mühüm göstəricisidir. Menstrual funksiya pozulmalarının əmələgəlmə mexanizmi mürəkkəb neyrohumoral tənzimləmənin hansı səviyyəsində olmasından asılıdır. Aybaşı tsikli hipotalamus-hipofiz-yumurtalıq sisteminə gedən dəyişikliklərdən asılı olaraq tənzimlənir.

Reproduktiv dövrdə aybaşının olmaması "amenoreya" adlanır. Amenoreya hipomenstrual sindromun daha ağır formasıdır. Fizioloji olaraq: hamiləlik, laktasiya dövrü və menopauzada təsadüf olunur. Qalan hallarda isə amenoreya patoloji prosesdir. Birincili və ikincili amenoreya ayırd edilir. Birincili amenoreya həqiqi və yalançı amenoreya kimi klassifikasiya olunur. Həqiqi amenoreya hormonal çatışmazlığa görə 16 yaşadək aybaşının tamamilə olmamasıdır. İkincili amenoreya isə əvvəl mövcud olan aybaşının 6 ay müddətində olmamasıdır. Qeyd etmək lazımdır ki, amenoreyanın formalarından asılı olaraq, hormonal göstəricilərdə dəyişikliklər nəzərə çarpır.

Tədqiqatın məqsədi amenoreyalı qadınlarda hormonal göstəricilərin dəyişmə xüsusiyyətlərinin öyrənilməsi olmuşdur.

Tədqiqatın materialına 40 amenoreyalı qız və gənc qadın daxil edilmişdir. 40 amenoreyalı xəstənin 12-də (30%) birincili amenoreya, 28-də (70%) ikincili amenoreya təyin olunmuşdur.

Tədqiqatda kliniki, ultrasəs, rentgenoloji, hormonal müayinə metodlarından istifadə edilmişdir.

Tədqiqat nəticəsində müəyyən olmuşdur ki, I-li amenoreyada normoqonadotrop forma-böyrəküstü vəzin anadangəlmə hiperplaziyası (n=1), hipogonadotrop forma-fiziki inkişafın ləngiməsi (n=6), Kallman sindromu (n=1), fiziki gərginlik (n=1), hiperqonadotrop forma isə qonadaların disgeneziyası (n=3) özünü biruzə vermişdir.

II-li amenoreyada isə normoqonadotrop forma-Aşerman sindromu (n=5), hipogonadotrop forma-hiperprolaktinemiya (n=8), yumurtalıqların polikistoz sindromu (n=6), hipotireoidizm (n=5), tireotoksik zob (n=4) nəticəsində baş vermişdir.

Bu qadınlarda FSH, LH, TSH, PRL, E₂, P, T, DHEA-S, T₃ və T₄ miqdarı təyin edilmişdir.

Beləliklə erkən reproduktiv dövrdə amenoreyalı qadınlarda qonadotrop və steroid hormonların azalması, prolaktinin miqdarının isə artması qeyd edilir. Buna səbəb amenoreyalı qadınlarda hipogonadotrop amenoreyanın daha yüksək tezliklə rast gəlməsidir.

DYNAMICS OF PULMONARY FUNCTIONAL INDICES AT CHRONIC OBSTRUCTIVE PULMONARY DISEASE

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INTRODUCTION

Chronic obstructive pulmonary disease (COPD) is a progressive disorder characterized with persistent, dense restriction of air flow and chronic inflammation developed in pulmonary airways in the response of dangerous particles and/or gasses, which as a rule is compliable to treatment and prevention. Chronic inflammation of pulmonary airways is associated with progressive worsening of pulmonary functional status and characterized with various degree dyspnea and episodes of exacerbations. [1][5]. The disorder progresses for several years and associated lethality is due to either disorder itself or complications associated with it. In future decade more spread of COPD is anticipated as it is related to pollution of environment and generally increased life expectancy of the population [5]. COPD is the third leading cause of lethality worldwide [4] [9], its urgency is related to widespread of the disorder either in developing or developed countries which is the significant challenge in treatment and prevention of the disorder in the field of healthcare [3][10]. By the data of World Health Organization it is recognized as one of the reasons of morbidity, mortality and global challenge of health care in modern universe [15][8]. According to evaluation of pulmonary function one of the most important factors determining severity of the disorder is forced expiratory volume in a second - FEV₁ (Forced expiratory volume [11] (after taking bronchodilator FEV₁ < 80% of estimated value and FEV₁/FVC<0,70 confirms existence of airflow restriction which is not completely reversible) [5]. Decrease of FEV₁ is estimated as an unreliable prognostic index for COPD which is associated, on the one hand, with frequency of disorder exacerbation and, on the other hand, increased risk of death [7][17][16]. Despite the importance of the problem looking for and identification of the factors which reliably correlate with the dynamics of decrease in FEV₁ is still the field of challenge. As well as, data existing in literature concerning this issue is quite different which itself rises questions on possible reasons of variability [6].

Main goal of COPD management is decrease in symptoms, prevention of exacerbations and generally interruption of disorder progress. As well as, considering global spread of disorder, the goal of any scientific research is development of COPD management strategy which helps in interruption of disorder progress by prevention of disorder risk-factors and its exacerbations.



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EPIDERMOLYSIS BULLOSA AND STEM CELL THERAPY

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Abstract

The main goal of regeneration or sustained genetic correction of damaged tissue, advanced tissue-engineering techniques are especially applicable for many dermatological diseases including wound healing, genodermatoses (like the severe blistering disorder epidermolysis bullosa) and chronic (auto-)inflammatory diseases. This review summarizes general aspects as well as current and future perspectives of stem cell therapy in dermatology.

Keywords: Epidermolysis bullosa, Bone-marrow transplantation, MSC-cell therapies.

INTRODUCTION: Stem cells (SCs), common to all multicellular organisms, are specified as undifferentiated self-replicating cells possessing the ability to generate, sustain and replace terminally differentiated cells. They show two key features: self-renewal (cell divisions with maintenance of the undifferentiated state), and capability of in vivo and in vitro reconstitution of a given tissue via differentiation into specialized cell types¹. SCs are commonly subdivided into two main entities, embryonic stem cells (ESCs) (pluripotent) and adult SCs (multipotent or unipotent).

METHODOLOGY: 1. MSC-cell therapies SC therapies are increasingly established in the experimental treatment of genetic diseases, recently also in patients with recessive dystrophic EB (RDEB), a rare genetic blistering disease. RDEB patients lack genes for synthesis of Collagen VII. These symptoms mainly account for more severe disease complications, such as mitten deformities of hands and feet and aggressive epithelial cancers.

MELANOCYTIC DISEASES

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ABSTRACT

It was traditionally assumed that cancer cells of melanoma arise from melanocytes. Recently, however, a hypothesis was posed that melanoma could also descend in extrafollicular SCs altered by harming factors such as ultraviolet (UV) A and UVB 5. Experimental studies are currently ongoing to investigate the mechanisms capable of causing damage to the DNA of SCs, as to ascertain this hypothesis

Keywords: Melanocytic diseases, Melanocyte development, Melanoma.

INTRODUCTION: McSCs are essential to maintain melanocyte populations in human skin and its appendages. Studies on McSCs have elucidated molecular mechanisms underlying ordinary melanocytic development as well as melanocyte-related pathological conditions like vitiligo and melanoma, although still many questions regarding the characterization of McSCs remain unsolved³. Human iPSCs may be useful for the characterization of human McSCs, since this application allows the acquirement of a sufficient amount of patient-specific melanocytes along the differentiation of iPSCs. These cells could then be applied for disease modeling and evaluation of potentially therapeutic approaches¹⁵⁶. The use of HSCs transplantation, adjuvant to chemotherapy and immunotherapy for patients with metastatic melanoma, has been already evaluated in clinical trials. These strategies should allow the use of increased chemotherapy doses for more efficient eradication of tumor cells. However, definitive results are still missing A distinct type of pluripotent, non-tumorigenic (in vivo) MSCs refer to the term multilineage-differentiating stress-enduring cells (Muse cells). These cells can be conveniently obtained from mesenchymal tissues (such as dermis and bone marrow) and human mesenchymal cultured cells (such as dermal fibroblasts). After culturing in a specific differentiation medium containing ten factors (Wnt3a, stem cell factor, endothelin-3, basic fibroblast growth factor, linoleic acid, cholera toxin, L-ascorbic acid, 12-O-tetradecanoyl-phorbol 13-acetate, insulin-transferrin-selenium, and dexamethasone), Muse cells derived from dermal fibroblasts have been shown to readily transform into functional melanocytes². These differentiated Muse cells expressed melanocytic markers, grew in 3D cultured skin and produced melanin after transplantation to the back skin of immunodeficient mice¹. However, in

contrast to other pSCs such as ES cells and iPS cells, Muse cells show low telomerase activity and are not able to grow tumors in vivo. This technique might be the basis for new treatment approaches to melanocytic diseases like vitiligo.

STEM CELL NICHES AND SKIN DISORDERS

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ABSTRACT

Skin SCs reside in specialized morphological and functional units with a specific microenvironment. These so-called niches may contain various SCs as well as supportive cells providing framework or signaling to the SCs. Within human skin, at least five different niches have been delineated (basal layer of the epidermis, HF bulge, base of sebaceous gland, dermal papillae and dermis), that harbor different types of skin SCs:

Keywords: Stem Cells, Dermal niches, Skin.

INTRODUCTION: a) Interfollicular epidermal SCs are scattered singly across the dermal-epidermal junction. In the mucosa and on the palms and soles, SCs are located at the base of the rete ridges. They constitute about 1%–7% of epidermal basal cells. Several human SC markers have been described, including high surface expression of $\alpha 6$ and $\beta 1$ integrins that may be relevant for sustaining the attachment of epidermal SC to their basement membrane through hemidesmosomes 1. Progenies from epidermal SCs that withdraw from the cell cycle, show a suppression of integrin $\alpha 6$ expression, before they start differentiating and moving towards the skin surface, where they slough off along terminal differentiation after approximately 4 weeks³³. Furthermore, p63 (a homologue of tumor suppressor p53), a low expression of transferring receptor (CD71) and desmoglein 3 as well as LRIG1, the scaffold protein FERM lineated (basal layer of the epidermis, HF bulge, base of sebaceous gland, dermal papillae and dermis), that harbor different types of skin SCs 2:

CINSI YETİŞKƏNLİK DÖVRÜNDƏ HIPERANDROGENİYA SINDROMU OLAN QIZLARDA D VİTAMİNİ VƏ KARBOHİDRAT MÜBADİLƏSİNİN DƏYİŞMƏ XÜSUSİYYƏTLƏRİ

Aidə Talıblı

Azərbaycan Tibb Universiteti, I mamalıq və ginekologiya kafedrası.

Son illərdə D vitaminin çoxsaylı fizioloji proseslərdə iştirakı haqqında elmi tədqiqatlar dərc olunub.

D vitaminin aktiv forması [1,25 dioksivitamin D (1,25 (OH)₂)] kalsiumun homeostazında, immun sistemin, mədəaltı vəzinin Langerhans adacıklarının beta-hüceyrələrinin, ürək-damar və əzələ sistemlərinin fəaliyyətinin, beyin funksional aktivliyinin tənzimində iştirak edir.

1,25(OH)₂ D₃ (kalsitriol) bağırsaqda kalsiumun sorulmasında, skelet sümüklərinin formalaşmasında, hüceyrə tsiklinin requlyasiyasında, hüceyrə proliferasiyasının tormozlaşmasında, makrofaqların funksiyasının stimulyasiyasında, antimikrob peptidlərin sintezində, insulinin ifrazında, renin angiotenzin sisteminin requlyasiyasında, qan laxtalanmasında, ürək əzələsinin fəaliyyətində, skelet əzələlərinin inkişafında rolu vardır .

D vitamini reproduktiv funksiyanın formalaşmasında iştirak edir, bu vitaminin çatışmazlığı aybaşı pozulmalarında, ginekoloji-endokrinoloji xəstəliklərin yaranmasında rolu vardır.

Aparılan elmi tədqiqatlara əsasən ABŞ-da əhəlinin 1/3 hissəsində D vitaminin defisiti (<20ng/ml) təyin edilib. Son 10-15 ildə ABŞ-da cinsi yetişkənlik dövrə olan qızlar arasında D vitamini çatışmazlığı 4 dəfə artıb.

Səbəbi aydın olmayan sonsuzluqların 15-30%-də D vitamini defisiti aşkar edilib.

Qan serumunda D vitaminin səviyyəsinin 20-30 ng/ml (50-70 nmol/l) olması bu vitaminin çatışmazlığı kimi qiymətləndirilir.



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EFFECT OF WHOLE BODY HYPERTHERMIA ON THE LEARNING AND MEMORY PROCESSES

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In 1910 the possibility of overheating in order to increase the radiation effect on malicious tumors was described for the first time. This already well-known and applied method was rediscovered as the so-called "Whole Body Hyperthermia" in the beginning of the 1960s.

Hyperthermia is almost always used with other forms of cancer therapy, such as radiation therapy and chemotherapy. Hyperthermia may make some cancer cells more sensitive to radiation or harm other cancer cells that radiation cannot damage [7]. If meant to be combined during treatment, hyperthermia and radiation therapy are usually given within an hour of each other. Hyperthermia can also enhance the effects of certain anticancer drugs, which is mutually strengthening and makes healing more likely – the so-called synergistic effect of hyperthermia [9]. It was revealed that cytostatic drugs (chemotherapy substances) clearly act more aggressively at temperatures over 40° C than within the range of normal body temperature.

Research has shown that high temperatures (up to 44°C) can damage and kill cancer cells, usually with minimal injury to normal tissues. By killing cancer cells and damaging proteins and structures within cells, hyperthermia may shrink tumors [4].

ENDOCRINE AND METABOLIC COMPLICATIONS IN TURNER SYNDROME

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ABSTRACT

The term "Turner syndrome" is a clinical feature and no clear recommendation for diagnosis exists, but most agree that the main stigmata include stunted growth with declining adult stature with or without additional phenotypic features, and with the exception of rare cases, also gonadal insufficiency and infertility. The phenotype must be accompanied by a karyotype with complete or partial absence of one sex chromosome, and in addition, mosaicism with two or more cell lines may be present.

The genetic background of the Turner syndrome phenotype is highly variable, but includes sex chromosome abnormalities (X and / or Y chromosomes). The prototypical karyotype of a woman with Turner syndrome – 45 X; those one X or one Y chromosome is missing. Statistically, it can be calculated that approximately two-thirds of all Turner's patients with a 45 X karyotype should have complement 46 XX and one third - complement 46 XY. However, it is now established that the majority of women with Turner syndrome do not have the "typical" karyotype – 45X, but have several different variants that cause clinical signs of Turner syndrome. The most common karyotypes are 45X, karyotypes with isochromosome X (i (Xq) or i (Xp)), mosaic karyotype 45 X / 46 XX, and karyotypes containing all or parts of the Y chromosome. It is argued that a pure karyotype 45 X does not exist, because such a person cannot survive in the womb. This statement is supported by rigorous studies that examine more than one tissue (i.e., other than lymphocytes) for mosaicism.

The prevalence of prenatal infection is much higher than postpartum infection. This indicates a high rate of Turner syndrome conception. This is evidenced by the very high prevalence of Turner syndrome karyotypes after chorionic villus sampling (performed on average at week 11).

However, the diagnosis of Turner syndrome is now less common than would be expected from initial cytogenetic studies, and there is a significant delay in the diagnosis of this syndrome in girls and adolescents. Interestingly, the key to the diagnosis was lymphedema in 97% of infants and short stature in 82% in childhood and adolescence. Due to the nature of the study (children only), there was no information on the keys to diagnosis in adults. The study also documented that the vast majority of patients had several stigmata at the time of diagnosis, which was expected to facilitate earlier diagnosis. Thus, the delay in diagnosis could not be explained simply by the absence of Turner syndrome manifestations in this population. In addition to the delay in diagnosis of the syndrome in childhood and adolescence, it must be emphasized that Turner syndrome is also diagnosed in adults. In a study of the entire population of women with Turner syndrome in Azerbaijan, the median age at diagnosis was 15 years, with a range of 0 to 86 years.

The incidence is increased in Turner syndrome. In a study of all diagnosed women with Turner syndrome and the general population of women in Azerbaijan, we compared the incidence rates of diseases that are thought to occur with increased

frequency. The relative risk (RR) of endocrine diagnosis in patients with Turner syndrome increases to 4.9, which is explained by the increased risk of hypothyroidism (RR 5.8), thyroiditis (RR 16.6), type 1 diabetes (RR 11.6) and type 2 diabetes (RR 4.4). Likewise, the risk of coronary heart disease and arteriosclerosis (2.1), hypertension (2.9) and cerebrovascular disease (RR 2.7) increased. The risk of other conditions, such as liver cirrhosis (RR 5.7), osteoporosis (RR 10.1), and fractures (RR 2.2), were also increased, as were the risks of congenital malformations of the heart, urinary system, face, ears and neck. The relative risk for all cancers was 1.35, with only the risk of colon and rectal cancer being significantly increased (RR 4.94). Two studies using two different and independent registries have shown that the overall cancer risk is comparable to the baseline population. Only the risk of colon cancer has been steadily increasing, possibly due to estrogen deficiency.

Current knowledge about the genetics of Turner syndrome does not explain much of the phenotypic characteristics of the syndrome. The diagnosis of Turner syndrome is typically simple, but often difficult, resulting in a rather significant delay in the diagnosis and inability to make a diagnosis. It is also obvious that many women never get Turner syndrome. Morbidity and mortality are increasing, but the etiology of the abnormalities that lead to this rather significant increase is not clear.

Key words: Turner syndrome, endocrine and metabolic complications, karyotype, manifestations

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