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PRINCIPLES OF EARLY DIAGNOSIS OF KIDNEY DAMAGE IN PATIENTS OF RHEUMATOID ARTHRITIS AND ANKYLOSING SPONDILOARTHRITIS

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Abstract. Systemic rheumatic diseases rheumatoid arthritis and ankylosing spondylitis are common and cause serious medical and economic problems. Chronic kidney disease occurring at any stage serves as a direct risk factor for cardiovascular complications. Detection of urinary syndrome, as well as changes in renal function are the main criteria for kidney damage. Thus, the detection of signs of kidney damage in the early stages can correct the timely treatment and thus influence the outcome of the underlying disease. Therefore, in the selected patients in the study, the indicators of renal impairment - urinary syndrome and GFR were studied. The study examined the characteristics of kidney damage in 60 patients with rheumatoid arthritis and 20 with ankylosing spondyloarthritis patients. Changes in renal function in these groups were analyzed depending on the age groups of the patients, the stage of disease activity, the duration of the disease, and the medications taken.

Keywords: rheumatoid arthritis, ankylosing spondyloarthritis, urine syndrome, chronic kidney disease, glomerular filtration rate, kidney damage.

INTRODUCTION. Improving the effectiveness of prevention and treatment of chronic non-communicable diseases is considered by the World Health Organization as a priority project of the XXI century aimed at improving the quality of life of the world's population (WHO, 2011). Diseases that cause deformity and deformation of the musculoskeletal system due to inflammatory and dystrophic, exudative-proliferative processes in the wrist joints are a topical issue for rheumatoid arthritis (RA) and ankylosing spondylitis (AS). [1,8]

RA is one of the most common autoimmune diseases, with an incidence of 0.5–2% in the adult population (5% in women over 60 years of age) and seronegative spondyloarthritis ranging from 0.15 to 4%, and is currently associated with the use of modern drugs. despite the fact that the disease is growing. In 50% of patients who come to the first examination by a rheumatologist, they present with a limited condition of the movement joints. In 60-90% of patients with a 20-year duration of the disease, there is a loss of ability to work, and in 3/1 of cases there is a complete disability. Rheumatoid arthritis and ankylosing spondylitis are socially significant rheumatic inflammatory diseases due to their high incidence, onset of age, chronic progression, long-term persistence, as well as the use of expensive drugs.

But here the outcome of the disease depends not only on the damage to the musculoskeletal system, but also on other internal organs (non-skeletal signs, STB) - damage to the eyes, heart, intestines, skin and kidneys [2,7]. According to a study by scientists, in about 42% of AS patients, nonverbal symptoms are observed, and kidney damage is a factor of negative consequences and causes disability in patients. According to various authors, kidney damage in RA accounts for 35 - 73% of patients. Within 5 years, half of these patients lose their ability to work, and 70% develop renal complications. Uremia causes the death of every fourth RA patient. [3,10]

Rheumatoid arthritis is a systemic inflammatory disease characterized by erosive destructive damage of the joints in the form of polyratritis, manifested by various extraarticular changes. The prevalence of RA is 0.7% in the global community. Every year, 0.02% of the population is infected with RA. [4]

Ankylosing spondylitis is also one of the most discussed issues by the therapeutic community. Over the past decade, the principles of monitoring and treatment of patients with these diseases have been revised, and new classifications, new genetic and immunological dependencies have been identified. In 2016, an international recommendation by the ASAS-EULAR group of experts outlined the characteristics of ankylosing spondylitis in patients with ankylosing

spondylitis, disease activity when associated with comorbidities, and management of the general condition of patients. Particular attention is paid here to satellite-related comorbidities. According to E. Strobel, various renal symptoms (erythrocyturia, leukocyturia, protinuria, increased serum creatinine), which are quite common in AS, are not always detectable and occur in up to 35%. [5,9]

In this case, the occurrence of symptoms as a primary symptom or complication of the disease, as well as a comorbid disease, it is difficult to clearly distinguish and classify these cases. According to A. Jacobson and co-authors, the risk of developing nephrolithiasis in AS patients is twice as high as in the general population [10]. As a risk factor, the author points to male gender, inflammatory bowel disease, and impaired intestinal absorption.

Many scientific studies on AS and kidney damage are similar. A selective study was conducted among 8–15% of AS patients, depending on changes in the urine analysis of patients. According to the research of B.Samia and co-authors, the epidemiological, clinical, therapeutic, prognostic features and predisposing factors in the development of nephropathy in AS patients were evaluated [3, 10].

Retrospectively, 212 AS patients were examined, and signs of kidney damage were identified in 32 of them. In 22 patients - microscopic hematuria, 23 - proteinuria, 11 - nephrotic syndrome, 24 - decreased renal function. Secondary amyloidosis was detected in 13 patients (6.1%) and in 17 people with a terminal stage of CKD with a duration of 29.8 ± 46. Factors contributing to the development of smoking, high inflammatory character, stage 3-4 sacroileitis, complete ankylosis of the spine, nephropathy in patients with AS with and without renal impairment.

When the importance of the majority of chronic diseases (cardiovascular, allergic, neurological, oncological, hematological, chronic lung diseases, diabetes mellitus) is studied, the ability to work is reduced, the patient's general condition worsens, the number of visits to the general practitioner increases in 1 year. were found to be Rheumatic diseases occur at any age, and in recent years there has been an increase in the number of cases of this disease. Expenditure on rheumatic diseases in the health sector is also having a negative impact on the state economy [6,8].

The aim of the study: To develop an algorithm for the assessment and early diagnosis of kidney damage in patients with RA and AS.

MATERIALS AND METHODS. The study was held at the Bukhara Regional Multidisciplinary Medical Center Department of Rheumatology RA and AS patients underwent clinical, instrumental, laboratory analyzes in all inpatients treated in 2019 and 2020, and 60 RA and 20 AS patients who came with them were randomly selected. The diagnosis of RA and AS was made on the basis of diagnostic criteria based on the 2010 classification of the American Society of Rheumatologists. Exception criteria were primary kidney disease, arterial hypertension stage II-III, diabetes mellitus.

Patients were evaluated for the course of the underlying disease, comorbidities, as well as medical history and pharmacotherapy they were receiving. Clinical blood analysis, urine analysis (Nechiporenko test and daily protein loss analysis according to the instructions), renal ultrasound examination was performed. Renal function was assessed according to GFR (Modification of Diet in Renal Disease Study (MDRD) formula), blood urea and creatinine levels.

RESULTS AND DISCUSSION. RA and AS are the most common systemic rheumatic diseases and cause serious medical and economic problems. Chronic kidney disease occurring at any stage serves as a direct risk factor for cardiovascular complications. Detection of urinary syndrome, as well as changes in renal function are the main criteria for kidney damage. Thus, the detection of signs of kidney damage in the early stages can correct the timely treatment and thus influence the outcome of the underlying disease. Therefore, in the selected patients in the study, the indicators of renal impairment - urinary syndrome and GFR were studied.

The total 60 RA patients was divided in two group, the first group without kidney damage 34 patients and with kidney damage 26 patients. Of the 34 patients without RA damage from RA

patients, 22 were female, 12 were male, and 26 patients with renal impairment, including 18 female and 8 male patients. The mean age was 52 ± 2.4.

Urine syndrome in patients with RA and AS proteinuria -13 % (10), erythrocyturia 16% (13), leukocyturia 14 % (11), proteinuria and erythrocyturia 6,5 %, proteinuria and leukocyturia 8 %, leukocyturia and erythrocyturia 6%, proteinuria , erythrocyturia and leukocyturia accounted for 2%.

When these results were compared with the control group, urinary syndrome was 32% in patients with RA and AS, while the wash rate was 5% in the control group, r = 0.001.

Correspondingly, hematuria was found in one in four patients with RA and AS alone or with other pathological changes, and a combination of leukocyturia and proteinuria was found to be relatively rare.

When renal function was examined, 56% of patients had normal GFR (> 90 ml / min / 1.73 m2), 28% had a slight decrease in GFR (60–89 ml / min / 1.73 m2), and 15% had a moderate decrease in GFR (30–59 ml / min / 1.73 m2) were observed. In the control group, normal GFR (> 90 ml / min / 1.73 m2) was detected in 82% of cases. In 18% of cases, a slight decrease in GFR (60–89 ml / min / 1.73 m2) was detected. It was not detected in the control group with GFR below 60 ml / min / 1.73 m^2.

Thus, with a decrease in renal function, RA and AS were detected in 40% of patients and in 18% in the control group, and when the relative level was compared, a difference was found between these groups. (r = 0.05)

In the next stage, the incidence of changes in the indicators of urinary syndrome according to the characteristics of the satellite disease and the course of the main disease was studied.

When comparing the age indicators of RA and AS patients with urinary syndrome, the highest change was found in patients aged 31–40 years.

Table №1

Age of patients	**<30, n = 7**	**31–40, n = 26**	**41–50, n = 15**	**51–60, n = 4**	**>60, n = 8**	**P < 0,05**
Urinary syndrome incidence rate,%	28 % (2 out of 7 patients)	54 % (14 out of 26 patients)	40 % (6 out of 15 patients)	25 % (one out of 4 patients)	37 % (3 out of 8 patients)	p1-2, p3-2, p4-2, p5-2, p1-5, p1-5, p2-5, p3-5, p4-5*

Note: If the difference between the groups has reached the level of statistical reliability (r = 0.05), the value of r is displayed.

It was found that RA and AS were more active at a younger age, which was the reason for the corresponding age in the selected patients. That is, RA stage 3 occurs in patients aged 31–40 years. In addition, the toxic effects of long-term drug therapy over time are certainly not absent.

When the symptoms of kidney damage in each disease were studied, the following results were obtained.

Table № 2

Levels of disease activity in patients of different ages

RA disease activity	<30, n = 7	31–40, n = 26	41–50, n = 15	51–60, n = 4	>60, n = 8	P < 0,05
I stage		1% (4 out of 60)	0,02 % (one out of 60)	0,02% (one out of 60)	0,02% (2 out of 60)	
II stage		10,0% (6 out of 60)	1 % (4 out of 60)	0,02 % (one out of 60)	0,02 % (2 out of 60)	
III stage	12 % (7 out of 60)	27 % (16 out of 60)	17 % (10 out of 60)	1 % (3 out of 60)	1 % (4 out of 60)	p1-2, p2-3, p2-4

The average incidence of ankylosing spondylitis in patients with ankylosing spondylitis is 26.04 ± 6.8, and the average disease duration is 5.0 ± 4.60. An average of 60% of AS patients received YQDV and basal medications during treatment. Overall, axial joint and peripheral joint involvement in 54% of cases were found to be involved in the process. HLA B27 positive result was detected in 95% of the selected AS patients.

Kidney damage was detected in a total of 20 patients (45.7%). Hematuria (15%) was detected in 3 of these patients, proteinuria in 10 patients (10%), and decreased GFR in 2 patients. The results showed that renal changes such as hematuria were detected in the majority of AS patients.

When comparing clinical blood analysis and renal changes in patients with AS, erythrocyte sedimentation rate and C reactive protein levels were higher in the group in which renal changes were detected. (20% and 15%; 43.6 ± 30.23 mm / s and 38.07 ± 26.02 mm / h; 32.12 ± 30.51 mg / L vs 27.27 ± 28.73 mg / L, respectively). These figures were statistically significant (P <0.05). It was also found that the rates of AS patients with renal impairment were higher than those of patients without renal impairment due to their age, age at first onset of the disease, age at first correct diagnosis, and duration of disease. (Table № 3)

Table № 3

№	Indications	Kidney damage		P
		Yes	Not	
	Demographic characteristics			
1.	Gender, male (%)	15 (75 %)	5 (25)	< 0,05
2.	Age (years)	35.20 ±6,5	30,44 ±5,8	0,05
3.	The age at which the disease was first diagnosed was (year)	26,65 ±8,6	25,76±7,6	0,22
4.	The year of diagnosis	32,78±9,8	31,66±8,7	0,06
	Clinic features			
5.	NSAID, n (%)	8 (30 %)	12 (70 %)	0,72
6.	Basic drugs, n (%)	6 (28 %)	14 (72 %)	0,53
.	Disease duration (years)	5,4 ±4,8	4,2±6,4	0,22
.	Peripheral arthritis, n (%)	5 (25 %)	15 (75 %)	0,05
	Biochemical parameters			
0.	HLA –B27 positive, n (%)	19 (95 %)	1 (5 %)	0,50
1.	ESR (mm/h)	46,86 ±20,56	42,68 ±22,68	< 0,05
2.	SRP (mg/L)	29,56 ±6,8	23,46 ±8,5	< 0,05
3.	Albumin (g/L)	42,23 ±8,6	45 ± 6,8	< 0,05

Among AS patients, 42% (71 patients) with chronic kidney disease (CKD) were reported. Hematuria was detected in 70% (49) and nephrotic syndrome in 20% (14) of these patients with renal impairment. Renal impairment was observed in 28 (40%) patients.

When comparing female and male patients with CKD, proteinuria was more pronounced in hematuria than in male patients, and the rate of renal hemorrhage was also found to be lower. Changes in renal function were also 6.2 and 2.7%, respectively. In addition, CKD male patients were found to be younger, had higher body weight, more frequent hypertension, and higher uric acid levels during AS activity than female patients. HLA-B27 was more positive in men. AS duration, ECG, and SRP values did not show a significant difference between male and female patients.

When risk factors for chronic kidney disease were studied, hyperuricemia syndrome and hypertension, high total cholesterol and triglyceride levels, decreased albumin levels, increased ECG, and renal dysfunction were identified in male AS patients.

When renal function was examined, 56% of patients had normal GFR (> 90 ml / min / 1.73 m2), 28% had a slight decrease in GFR (60–89 ml / min / 1.73 m2), and 15% had a moderate decrease in GFR. (30–59 ml / min / 1.73 m2) were observed. In the control group, normal GFR (> 90 ml / min / 1.73 m2) was detected in 82% of cases. In 18% of cases, a slight decrease in GFR (60–89 ml / min / 1.73 m2) was detected. It was not detected in the control group with GFR below 60 ml / min / 1.73 m2.

Thus, AS was detected in 40% of patients with decreased renal function and 18% in the control group, and when comparing the relative levels, it was found that there was a difference between these groups. (r = 0.05)

The mean age of the patients was 43,6 ± 12.4, and the duration of AS disease was 10,2 ± 8.6. The HLA-B27 assay was 92%. The proportions of hyperuricemia syndrome and hypertension were analyzed in 20% (34 patients) and 18% (31 patients), respectively. The mean disease duration was 5.0 ± 4.60. An average of 60% of AS patients received NSAIDs and basal medications during treatment.

The incidence of kidney damage in patients with AS is hematuria, proteinuria, decreased renal function from 10% to 35%. To provide more accurate information on the risk factors for kidney damage in patients, the groups were divided into 3 according to their clinical characteristics. Patients according to demographic characteristics, clinical and biochemical indicators, sex, age, age at which the disease was first diagnosed (years), year of diagnosis (years), NSAIDS, basic drugs, disease duration (years), peripheral arthritis, HLA-B27 positive, ECG (mm / s), SRP (mg / L), albumin (g / L) readings were compared with patients with renal impairment and no renal impairment. A multivariate logistic regression analysis was performed based on one factor intergroup differences data. Statistical differences were identified in patient sex, diagnosed age, ECG, SRP, and albumin.

When comparing clinical blood analysis and renal changes in patients with AS, erythrocyte sedimentation rate and C reactive protein levels were higher in the group in which renal changes were detected. (20% and 15%; 43.6 ± 30.23 mm / s and 38.07 ± 26.02 mm / h; 32.12 ± 30.51 mg / L vs 27.27 ± 28.73 mg / L, respectively). These figures were statistically significant (P <0.05). It was also found that the indicators of AS patients with renal impairment were higher than those of patients without renal impairment due to their age, the age at which the disease first appeared, the age at which the disease was first correctly diagnosed, and the duration of the disease.

CONCLUSIONS. Based on the research, early detection of signs of kidney damage in patients with rheumatoid arthritis and ankylosing spondylitis was studied, risk factors leading to the development of the disease in the population, a risk index mathematical module was created to identify risk groups, and an algorithm for early detection and prevention of kidney disease was developed.

Rheumatoid arthritis and ankylosing spondylitis are socially significant rheumatic inflammatory diseases due to their high incidence, onset of age, chronic progression, long-term persistence, as well as the use of expensive drugs. Chronic lesions among RA and AS rheumatic diseases are characterized by high prevalence in the population, long periods of asymptomatic, high morbidity and mortality rates, leading to a sudden decrease in patient quality of life.

Early detection of kidney damage in rheumatoid arthritis and ankylosing spondylitis can help prevent the expected adverse complications and consequences. As a result, chronic kidney disease and chronic renal failure are prevented, leading to an improvement in disability and fitness.

1. Determination of urine syndrome for RA and AS patients can be a simple and sensitive marker of early kidney damage, including drug-induced pathology of kidney.

2. Renal damage in patients with ankylosing spondylitis was more pronounced in men than in women, hyperuricemia was more pronounced in both sexes, hypertension, and low albumin levels were more common in male patients.

3. Risk factors for renal complications were established: age, high activity and duration of RA and AS disease.

4. In patients with RA and AS, the development of kidney damage and the severity of its manifestations are determined by the duration and activity of the underlying disease, and by age.

Practical recommendations.

1. Given the above reasons and the high incidence of renal impairment in patients with RA and AS, it is advisable to introduce active detection of signs of subclinical renal impairment.

2. Given that the symptoms of chronic kidney disease are directly proportional to the duration of AS disease, indicators of renal subclinical damage should be checked 5 years after the diagnosis of RA and AS.

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OPHTHALMOLOGIC COMPLICATIONS IN THE STRUCTURE OF THE CLINICAL FEATURES OF NOVEL CORONAVIRUS INFECTION (COVID-19)

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Abstract. The data from 26 patients suffering from COVID-19 during the manifestation of the disease served as the material for the research. The features of pathological processes in various parts of the organ of vision have been demonstrated with the help of ophthalmologic and standard examination methods. The data received, together with information from the reference materials, allow us to draw conclusions about the damage to the structures of the organ of vision under COVID-19, depending on the concomitant somatic pathology and the state of homeostasis in the body. Emphasis is placed on mutiltifactory lesion of both the front segment and the vitreoretinal interface. Today, the variability of ophthalmic complications is demonstrated in the form of catarrhal conjunctivitis, vascular and inflammatory lesions, in the flesh to the phlegmon of the orbit and thrombosis of the carotid-cavernous sinus, which is a frightful and life-threatening condition. In the light of the foregoing, it can be concluded that today the organ of vision is a target organ under COVID-19. Thus, ophthalmologists are required to develop a unified classification for ophthalmic complications under COVID-19, which facilitates the effective management and pathogenetic targeted correct therapy.

Key words: organ of vision, papilophlebitis, hemophthalmos, caratid-cavernous sinus, retrobulbar neuritis

Relevance of the topic. After severe respiratory syndrome and Middle East respiratory syndrome in 2004, the 2019 global pandemic caused by a novel β-coronavirus virus, called SARS-CoV-2, was the third coronavirus pandemic in 2019. The source of SARS-CoV-2 has not yet been identified, but there are suggestions about the zoonotic type of infection. Human-to-human transmission occurs through close contact with an infected person, due to airborne-droplets, air-dust transmission path. Also, recorded and described the contact-household and fecal-oral transmission routes. The average infected age is 51. The most severe course develops in patients 60 years and older, with concomitant diseases such as diabetes mellitus (20%), arterial hypertension (15%), and other cardiovascular diseases (15%) [1]. The clinical picture can vary from acute respiratory viral infection (mild course) 80%, to pneumonia with symptoms of respiratory failure, ARDS, respiratory distress syndrome, sepsis and septic (infectious toxic) shock (severe course). It gives negative impacts, with lesions of target organs such as heart, brain, kidneys and eyes to multiple organ failure. Hypoxemia develops in more than 30% of those infected (SpO^2 less than 88%) [2]. The disease can be attributed to generalized vasculitis, and the developing lung pathology is a variant of angiogenic pulmonary edema. The pathogenesis of COVID-19 fits not only into the picture of catarrhal phenomena in the upper and lower respiratory tract. One of the main damaging factors is a violation of blood coagulability with the start of intravascular disseminated coagulation.

At an early stage of the epidemic, ophthalmic symptoms manifested themselves in the form of follicular conjunctivitis. With the passage of time, and the clinical symptoms were studied in more depth, the sources report increasingly of damage to the posterior segment of the eyeball and the adnexa of the organ of vision. Patients with confirmed SARS-CoV-2 manifested central retinal vein thrombosis in combination with thrombosis of the lower extremities [3]. A case of papilophlebitis was registered - it is a variety of occlusion of the central retinal vein. In both cases the authors indicate that the cause was hypercoagulation [4]. In addition, there is data on the registration of vitriitis and other diseases of the choroid of an inflammatory nature. The authors suggest this can be caused by the autoimmune genesis of the disease [5].

As of today, the sources do not portray the variations of ophthalmic complications and specific management tactics for patients with severe forms of damage to the organ of vision under COVID-19.

Aim of the study. Develop generalization and summary of the variability of ophthalmic complications under (when infected with) COVID-19.

Materials and methods used. The findings from clinical and functional studies were based upon the analysis of data from 26 (52 eyes) patients with a confirmed diagnosis of COVID-19 during the period of manifestation of the disease, with ophthalmological complications. They were hospitalized in the emergency ophthalmology department of the Tashkent Clinical Emergency Hospital in the period from 09.10.20 - 20.11.2020. Among them, there were 13 males, 11 females, aged 18 to 81. The SARS-CoV-2 virus was detected through PCR testing in 18 (69%) patients. All patients were diagnosed with polysegmental viral pneumonia with the 1-3rd degree of severity of lung lesions, according to computed tomography (CT) and through ARF (Acute Respiratory Failure) testing - 1-2nd degree severities. In the medical history of somatic diseases, hypertension was recorded in 5 (19%) patients, type II diabetes mellitus was recorded in 9 (34.6%) patients, 5 (19%) patients had mild and moderate iron deficiency anemia, 5 (19%) patients had rhinosinusitis, sinusitis was recorded in 2 (7.6%). 2 patients suffered from ophthalmic complications in the form of moderate myopia, open-angle glaucoma was found in 1 patient, cataracts was found in 3 patients, diabetic retinopathy in the paired eye was found in 4 patients, and 2 patients had hypertensive angiopathy.

The research involves: collection of anamnestic data and complaints about the presence of changes in taste and smell; clarification of the degree of severity CT according to medical records.

In compliance with the Temporary Methodological Recommendations developed by the Ministry of Health of Uzbekistan, with purpose of prevention, diagnosis and treatment of new coronavirus infection, patients with COVID-19 received symptomatic, immune-modulatory, antiviral, anticoagulant, prophylactic antibacterial therapy.

All patients received traditional ophthalmological examinations, such as: visometry with determination of the maximum corrected visual acuity, according to the table (HCP 700, Huvitz, Korea), auto-refractometry, tonometry (Maklakov), non-contact ophthalmotonometry (TRK-1P, Topcon, Japan), B-scanning, statistical perimetry (HFA 745 i, Carl Zeiss, Germany), direct and reverse ophthalmoscopy (with a 90.0D non-contact lens, in addition to the standards, optical coherence tomography (OCT) was performed on the RTVue 100 apparatus (Optovue, USA). The patients also received MRI of the brain as well as consultation based on indications from ENT specialists, neurosurgeons, hematologists and endocrinologists.

Analysis of the statistical data. Details are presented for continuous values as average and standard deviation; for an overview of the presence of signs, the absolute number of patients and the percentage of the total group size are presented. Fisher's exact test

was used to compare the data. $P < 0.05$ was considered a statistically significant difference. Statistical data processing was carried out on a personal computer using Microsoft Excel 2016 software.

Results

Bacterial conjunctivitis encountered in 2 (7.5%) cases, and acute catarrhal conjunctivitis in 2x (7.5%) cases.

All patients with ID (iron deficiency) anemia of varying degrees suffered from acute herpetic keratitis - 4 (15%); acute iridocyclitis was observed in one patient with type II diabetes mellitus and in 2 patients with rhinosinust (11.5%); posterior uveitis in 4 (15%) patients with type II diabetes mellitus; in 3 patients with hypertension of various degrees and type II diabetes mellitus and in one patient isolated with hypertension, hemophthalmus was recorded in total - 4 (15%); acute circulatory disorders in the central retinal artery in 2 (7.6%) patients with hypertension; neurovasculitis was observed in the 1 (3.8%) patient with ID anemia; the patient with retrobulbar neuritis had no concomitant pathology -1 (3.8%); phlegmon of the orbit, followed by thrombosis of the cavernous sinus - was observed in 3 patients (11.5%) with rhinosinusitis and sinusitis.

Findings

The cited arguments justify the cause of multifocal damage to the organ of vision when infected with COVID-19. The degree and nature of disorders in the tissues of the organ of vision depends on the individual characteristics of the organism.

Provided we consider ID anemia as a factor influencing immunodeficiency, then the level of ID anemia under COVID-19 can contribute to the development of other viral infections (in our cases Herpes simplex). Metabolic syndrome have brought vascular complications such as ischemic (in nature), and complications of an inflammatory nature. The latter was complicated ENT pathologies up to cavernous sinus thrombosis. Based on the afore-mentioned, it can be concluded that today the organ of vision is a target organ under COVID-19, and ophthalmologists need to develop a unified classification concerning ophthalmic complications under COVID-19. This facilitates the management and pathogenetic targeted correct therapy.

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MORPHOMETRIC INDICATORS OF PHYSICAL DEVELOPMENT AND SPINE IN GIRLS UNDER 8 YEARS OF AGE

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Abstract. The aim of the study was to study the parameters of the physical development of healthy girls under the age of 8 years and compare them with the parameters of the spinal column. It was found that the highest rate of increase in body weight, height and length of the spinal column is observed in 1- and 2-year-old girls, and the smallest at 3 years and 7 years. Longitudinal parameters and body weight in females up to 8 years of age grows more in 1- and 2-years of life, and transverse dimensions in 1- and 3-years of life. It was revealed that at the age of 3 and 7 years, the growth of longitudinal sizes slows down, and at 5 and 6 years of age - the transverse. The parameters of the spinal column in girls aged 0-7 years change abruptly, depending on the period of development of children. morphometric parameters of the spinal column changed with age - in the early period of childhood they were noted in the cervical and lumbar spine, and in the second period of childhood they were more pronounced in the thoracic and sacral spine.

Keywords: morphometric parameters, physical development, spinal column, female children.

INTRODUCTION. One of the most important tasks of morphologists is the study of age, individual, sex and anthropometric characteristics of the organism at different stages of ontogenesis under different specific conditions and on this basis the development of preventive measures [4, 7, 13].

The preschool period is a special period of postnatal development, which is characterized by a change in many morphometric parameters of various parts of the human body, especially a peculiar change in the spinal column [1, 9].

An informative criterion for assessing the physical health of children is the study of anthropometric indicators of growth and development of various age groups. Without studying the anthropometric normative parameters of different age groups, it is impossible to predict pathologies among children [3, 7, 12, 13].

The anthropometric parameters of children differ between different regions of residence of the population, since there are differences in climatogeographic, ecological, socio-economic conditions of residence, national customs and traditions of peoples living in different territories [5, 8, 11].

It is known that in childhood, the child's spine not only performs all its functions, but is also in conditions of postnatal development. The vertebral column is a biomechanically important system-forming element of the skeleton. Its anatomical, physiological and biomechanical properties significantly affect the formation of posture and the state of human health. The spine and related structures play a leading role in maintaining and maintaining an upright posture. This task is associated with the antigravity work of each of the elements of the spine [2, 6, 14].

Consequently, the identification of the features of physical development, as well as the development of national standards for changes in the spinal column depending on the age and gender of children for our region is one of the important tasks of modern medical science and practice.

Purpose of the study. To study the parameters of the physical development of healthy girls in a comparative aspect at the age of up to 8 years and compare them with the longitudinal parameters of the spinal column.

MATERIALS AND METHODS. The material for the study was practically healthy children from maternity hospitals, inmates of kindergartens and schools in the city of Bukhara. A total of 216 girls under the age of 8 (0-7 years) were examined. By age the girls were distributed as

follows: newborns (n = 10); up to 1 year (n = 20); 2-year-olds (n = 20); 3-year-olds (n = 35); 4-year-olds (n = 25); 5-year-olds (n = 32); 6-year-olds (n = 34); 7-year-olds (n = 40).

Body weight is measured using medical scales for newborns (up to 1 year old) and for adults in kilograms (kg).

Standard height meters were used to measure height. In this case, the child's body was free, without touching the vertical bar. The measurements of the length of the body while standing, sitting, as well as the length of the body were carried out.

Measurement of the chest circumference was carried out using a meter measuring tape.

To measure the height of the spinal column, its parts separately, the height of the intervertebral discs and the longitudinal dimensions of the vertebral foramen, we used images of digital radiography, computed tomography (CT), and magnetic resonance imaging (MRI). To analyze the parameters of the spinal column, the program “MLV. Ink. Philips ".

The obtained data were subjected to statistical processing on a computer with a Pentium-IV processor using the Microsoft Office Excel-2003 software package, including the use of built-in statistical processing functions.

RESULTS AND DISCUSSION. Studies have established that the body weight of newborns ranged from 3.30 kg to 3.78 kg - the average was 3.54 ± 0.18 kg. As shown in the first 3-5 days after birth, there was a physiological weight loss of 200-245 g of the initial weight. This weight was restored within 10-12 days after birth.

The growth indicators of female newborn children ranged from 46.0 cm to 52.0 cm, averaging 49.0 ± 2.23 cm.The chest circumference ranged from 10.7 cm to 13.7 cm, averaging 12. 2 ± 0.48 cm, and the transverse diameter of the chest ranged from 6.9 cm to 10.8 cm, averaging 8.85 ± 0.35 cm.

The measurements showed that the total length of the spinal column in newborns ranged from 21.5 cm to 27.0 cm (on average 24.25 ± 1.2 cm). The length of the cervical spine varied from 2.0 cm to 3.0 cm - on average, 2.5 ± 0.3 cm (10.3% of the total length of the spinal column). The length of the thoracic region was in the range of 10.5-14.5 cm - on average 12.5 ± 0.5 cm (51.5% of the total length). The length of the lumbar spine ranged from 4.0 cm to 6.5 cm, on average 5.25 ± 0.4 cm (21.6% of the total length). The length of the sacrococcygeal region varied from 3.5 cm to 6.0 cm - on average 4.75 ± 0.3 cm (1% of the total length of the spinal column).

The height of girls of infancy (1 year old) varied from 60.6 cm to 76.0 cm - on average 68.3 ± 2.72 cm.Body weight ranged from 6.8 kg to 9.6 kg - on average it was 8 , 2 ± 0.41 kg. The chest circumference in the pause ranged from 28.3 cm to 33.3 cm - an average of 30.8 ± 1.0 cm.The transverse chest diameter ranged from 7.9 cm to 11.0 cm - an average of 9.45 ± 0, 58 cm.

The longitudinal parameters of the spinal column in girls 1 year old did not change evenly. The total length of the spinal column ranged from 31 cm to 33.5 cm, which averaged 32.25 ± 1.5 cm.The length of the cervical spine varied from 2.5 cm to 3.5 cm - on average 3.0 ± 0, 3 cm (9.3% of the total length of the spinal column). The length of the thoracic region ranged from 17.5 cm to 20.5 cm - on average 19.0 ± 0.5 cm (58.9% of the total length). The length of the lumbar spine ranged from 6.0 cm to 8.5 cm - on average 7.25 ± 0.4 cm (22.4% of the total length). The length of the sacrococcygeal region varied from 4.5 cm to 6.0 cm - on average, 5.25 ± 0.3 cm (16.2% of the total length of the spinal column).

With increasing age, the parameters of physical development of children also gradually increased. So the growth of 2-year-old girls was from 78.6 cm to 89.4 cm - on average 84.0 ± 4.12 cm.The weight of their body ranged from 11.7 kg to 14.5 kg - on average it was equal to 13.1 ± 0 , 65 kg. The chest circumference in the pause ranged from 33.4 cm to 36.0 cm - on average 34.7 ± 1.35 cm.The transverse diameter of the chest ranged from 10.2 cm to 12.0 cm - on average 11.1 ± 0.44 cm.

In the second year of life of the surveyed girls, the total length of the spinal column ranged from 36.0 cm to 38.5 cm, averaging 37.25 ± 1.2 cm. The length of the cervical spine varied from 3.0 cm to 3.5 cm, being in average -3.25 ± 0.5 cm (8.7% of the total length of the spinal column). The length of the thoracic spine was in the range of 20.5-21.5 cm, on average - 21.0 ± 0.7 cm

(56.3% of the total length). The length of the lumbar spine ranged from 6.0 cm to 6.5 cm, averaging 6.25 ± 0.4 cm (16.7% of the total length). The length of the sacrococcygeal region varied from 5.5 cm to 6.2 cm, averaging 5.85 ± 0.3 cm (15.7% of the total length of the spinal column).

Studies have found that the height of 3 year old female children varied from 83.0 cm to 94.0 cm, averaging 88.5 ± 4.40 cm, and body weight ranged from 11.4 kg to 14 kg, on average. was equal to 12.7 ± 0.87 kg. In girls of this age, the chest circumference in the pause ranged from 46.3 cm to 52.2 cm, on average 49.25 ± 2.26 cm. The transverse diameter of the chest ranged from 13 , 9 cm to 18.0 cm, on average 15.95 ± 0.48 cm.

The total length of the spinal column of 3-year-old girls ranged from 37 cm to 39.3 cm, averaging 38.15 ± 1.2 cm.The length of the cervical spine varied from 3.5 cm to 4.0 cm, on average 3.75 ± 0.4 cm (9.8% of the total length of the spinal column). The length of the thoracic region ranged from 21.5 cm to 22.5 cm, on average 22.0 ± 0.5 cm (57.6% of the total length). The length of the lumbar spine ranged from 6.5 cm to 7.8 cm, with an average of 7.15 ± 0.3 cm (18.7% of the total length). The length of the sacrococcygeal region varied from 5.5 cm to 6.2 cm, averaging 5.85 ± 0.3 cm (15.3% of the total length of the spinal column).

It was found that the height of 4 year old female children varied from 88 cm to 104 cm - an average of 96.0 ± 4.55 cm.The body weight ranged from 12.6 kg to 15.6 kg - on average it was 14, 4 ± 0.99 kg. Their chest circumference in the pause ranged from 49 to 55 cm - on average 52.0 ± 2.34 cm, and the transverse diameter of the chest ranged from 12.4 cm to 18.6 cm - on average 15.5 ± 0.43 cm.

It was revealed that the total length of the spinal column in 4 year old female children ranged from 36.8 cm to 47.8 cm, averaging 42.3 ± 2.42 cm. The length of the cervical spine varied from 3.5 cm to 5.96 cm, on average 4.73 ± 0.28 cm (11.1% of the total length of the spinal column). The length of the thoracic region ranged from 15.72 cm to 29.9 cm, averaging 22.81 ± 1.14 cm (53.9% of the total length). The length of the lumbar spine ranged from 4.78 cm to 8.58 cm, averaging 6.68 ± 0.34 cm (15.7% of the total length). The length of the sacrococcygeal region varied from 5.32 cm to 9.8 cm, averaging 7.56 ± 0.43 cm (17.87% of the total length of the vertebral column).

In the course of the studies, it was revealed that the height of 5 year old female children varied from 101.0 cm to 108.0 cm, averaging 104.5 ± 4.96 cm.The weight of their body ranged from 15.6 kg to 18.2 kg, on average was equal to 16.9 ± 0.80 kg. In girls of this age, the chest circumference in the pause ranged from 52.0 cm to 57.0 cm, averaging 54.5 ± 2.67 cm, and the transverse diameter of the chest ranged from 13.2 cm to 24.6 cm, in averaging 18.9 ± 0.24 cm.

The measurements showed that the total length of the spinal column in 5 year old female children ranged from 38.0 cm to 44.8 cm, on average 41.4 ± 2.12 cm. The length of the cervical spine varied from 4.18 cm to 6.2 cm, on average 5.19 ± 0.28 cm (12.5% of the total length of the spinal column). The length of the thoracic region ranged from 14.96 cm to 30.9 cm, on average 22.93 ± 1.14 cm (55.38% of the total length). The length of the lumbar spine ranged from 5.67 cm to 8.79 cm, with an average of 7.23 ± 0.34 cm (17.4% of the total length). The length of the sacrococcygeal region varied from 6.09 cm to 9.8 cm, averaging 7.94 ± 0.43 cm (19.17% of the total length).

The height length in 6 year old female children varied from 107 cm to 117.5 cm, which averaged 112.25 ± 5.12 cm.The body weight ranged from 15.9 kg to 22.1 kg, on average was 19 , 0 ± 1.09 kg. In addition, in these girls, the chest circumference in the pause ranged from 53.4 cm to 60.4 cm, averaging 56.9 ± 0.27 cm, and the transverse diameter of the chest ranged from 14.8 cm to 19.5 cm, which averaged 17.15 ± 0.45 cm.

Careful measurements of the spinal column showed that in 6 year old girls its length fluctuated between 40.0 cm and 50.1 cm, averaging 45.05 ± 2.64 cm. The length of the cervical spine varied from 6.0 cm to 6.8 cm, averaging 6.4 ± 0.34 cm (14.20% of the total length of the spinal column). The length of the thoracic region ranged from 17.7 cm to 30.8 cm, averaging 24.25 ± 1.53 cm (53.82% of the total length). At the same time, the length of the lumbar spine

fluctuated between 7.64 cm and 8.58 cm, averaging 8.11 ± 0.4 cm (18.0% of the total length). The length of the sacrococcygeal region varied from 7.8 cm to 10.2 cm, averaging 9.0 ± 0.54 cm (19.97% of the total length of the spinal column).

The above measurements were also carried out in girls of 7 years of age. Studies have found that the length of height in female children of this age group varied from 117.0 cm to 127.0 cm, averaging 122.0 ± 5.12 cm, and body weight ranged from 16.2 kg to 21.8 kg, on average was equal to 19.0 ± 1.06 kg. In the same girls, the chest circumference in the pause was in the range from 54.0 cm to 64.2 cm, averaging 59.1 ± 3.11 cm, measurements of the transverse diameter of the chest gave the following results: the range of fluctuations from 16.9 cm to 19.5 cm, the average figure is 18.2 ± 0.53 cm.

The total length of the spinal column in the same 7-year-old female children ranged from 36.29 cm to 56.61 cm, averaging 46.45 ± 2.45 cm. The length of the cervical spine varied from 3.94 cm to 7.58 cm, averaging 5.76 ± 0.4 cm (12.4% of the total length of the spinal column). The length of the thoracic region ranged from 18.87 cm to 29.8 cm, averaging 24.33 ± 1.53 cm (52.37% of the total length), and the length of the lumbar region ranged from 6.2 cm to 9.2 cm. averaging 7.7 ± 0.54 cm (16.5% of the total length). The length of the sacrococcygeal region varied from 6.76 cm to 10.6 cm, averaging 8.68 ± 0.4 cm (18.68% of the total length).

Comparing the growth rates of morphometric parameters of physical development and parameters of the spinal column of girls from newborn to 7 years of age, we found that the highest rate of increase in body weight, height and length of the spinal column is observed in 1- and 2-years of life, and the smallest at 3 years and 7 years (Table 1).

It was found that the rate of increase in the size of the chest circumference and the transverse diameter of the chest in girls from newborn to 7 years old was highest at 1 and 3 years old, and the lowest at 5- and 6 years old.

The study found that the longitudinal parameters and body weight in females up to 8 years of age grows more in 1- and 2-years of life, and the transverse dimensions in 1- and 3-years of life. It was revealed that at the age of 3 and 7 years the growth of longitudinal sizes slows down, and at 5 and 6 years of age - the transverse ones.

Table 1

Indicators of the growth rate of morphometric parameters of the body and spinal column up to 8 years of age in females, in%

Age	Height	Weight	Chest circumference	Transverse chest diameter	Vertebral column length
1 year	39,4	131,6	38,7	8,7	33,6
2 year	20,9	54,8	12,7	15,4	17,2
3 year	6,7	3,5	37,2	39,6	2,7
4 year	9,1	9,5	7,7	5,2	10,0
5 year	10,7	9,0	4,1	3,7	2,3
6 year	8,7	21,0	4,5	3,6	5,1
7 year	8,9	1,1	7,9	4,0	2,1

Such changes, in our opinion, are associated with a change in the type of nutrition (from breastfeeding to mixed and from mixed to independent) and lifestyle (from diaper to crawling, from crawling to walking, as well as the beginning of school age).

The morphometric parameters of the spinal column in the examined girls 0-7 years old are summarized in table. 2. This table can be used to judge the longitudinal parameters of the spinal region in a comparative aspect with the increase in the age of the studied girls.

Analysis of the results obtained for measuring the spinal column shows that the length of the thoracic spine is more than half of its total length. Of all the departments, the thoracic part of the spinal column in the 1st year of life and in subsequent years (at the age of 7 inclusive) increases at a high rate (Table 2).

This is apparently associated with the growth and development of the organs of the chest cavity and their functions, depending on the age of the studied female children.

Table 2

Morphometric parameters of the spinal column in girls under 8 years old

Age	Total length	Cervical length	Thoracic length	Lumbar length	The length of the sacrococcygeal region
Newborn.	24,25±1,20	2,5±0,30	12,5±0,5	5,25±0,40	4,75±0,3
1 year	32,25±1,5	3,0±0,30	19,0±0,5	7,25±0,40	5,25±0,3
2 year	37,25±1,2	3,25±0,50	21,0±0,7	6,25±0,40	5,85±0,3
3 year	38,15±1,2	3,75±0,40	22,0±0,5	7,15±0,30	5,85±0,3
4 year	42,3±2,42	4,73±0,28	22,81±1,14	6,68±0,34	7,56±0,43
5 year	41,4±2,12	5,19±0,28	22,93±1,14	7,23±0,34	7,94±0,43
6 year	45,05±2,64	6,4±0,34	24,25±1,53	8,11±0,40	9,00±0,54
7 year	46,45±2,45	5,76±0,40	24,33±1,53	7,7±0,54	8,68±0,4

We found that the growth rate of the cervical spine until 2 years of age was relatively slow. We argue that this is due to the function of vertical holding of the girls' head, which is supported by the cervical vertebrae. It should be noted that at this age cervical lordosis begins to form.

Starting from 2 years of age in girls, the growth rate of the lumbar and sacrococcygeal spine markedly decreased. This was due to the beginning of the girl's direct walking, in which the main load falls on these parts of the spinal column.

In addition, the indicators of the growth rates of the morphometric parameters of the spinal column in girls under 7 years of age were determined in a comparative aspect (Table 3).

Table 3

Indicators of growth rates of morphometric parameters of the spinal column up to 8 years of age in females, in%

Age	Cervical length	Thoracic length	Lumbar length	The length of the sacrococcygeal region
Newborn.	10,0	51,4	21,52	17,1
1 год	11,0	51,4	20,56	17,0
2 года	11,4	55,15	14,73	17,98
3 года	11,5	54,45	15,7	18,35
4 года	12,0	54,45	15,8	17,75
5 лет	12,0	52,95	16,7	18,35
6 лет	12,0	52,95	16,7	18,35
7 лет	12,4	52,4	16,5	18,7

It was found that the growth rates of these parameters of the spinal column in girls are not the same depending on age and do not change in the same way. The relationship between the increase in the object under study and the increase in the functional activity of the girls' body was revealed.

It was proved that the growth rate of the spinal column in girls in length at 4-7 years old significantly decreased - cervical lordosis was formed, at 6 years old lumbar lordosis was completely formed, and at 7 years of age, sacral kyphosis was formed in the girls examined by us.

CONCLUSION.

1.It was found that the highest rate of increase in body weight, height and length of the spinal column is observed in 1- and 2-year-old girls, and the smallest at 3 years and 7 years. The rate of increase in the size of the circumference of the chest and the transverse diameter of the chest in girls from newborn to 7 years, inclusive, was the highest at 1 and 3 years, and the lowest at 5 and 6 years of age.

2.Longitudinal parameters and body weight in females up to 8 years of age grows more in 1- and 2-years of life, and transverse dimensions in 1- and 3-years of life. It was revealed that at the age of 3 and 7 years the growth of longitudinal sizes slows down, and at 5 and 6 years of age - the transverse ones. Such changes are associated with a change in the type of diet and lifestyle of the child.

3.It was found that the parameters of the spinal column in girls aged 0-7 years change abruptly, depending on the period of development of children. In the early period of childhood, there was a rapid growth of the spinal column in girls 0-7 years old.

4.The ratios of morphometric indicators of different parts of the spinal column (cervical, thoracic, lumbar and sacrococcygeal) changed with age - in the early period of childhood they were noted in the cervical and lumbar spine, and in the second period of childhood they were more pronounced in the thoracic and sacral spine.

5.In newborns, the intervertebral discs were half the length of the entire spinal column. In newborns, the long bends (kyphosis) of the thoracic spine is completely completed by the age of 6-7 years. Lordosis of the lumbar spine in newborns is poorly expressed, but cervical lordosis is absent. They become pronounced by 9-12 months and are formed by 6-7 years of age, regardless of the sex of the child.

6.It has been proven that the length of the thoracic spine is more than half of the total length of the spinal column. Of all parts of the spinal column, the thoracic part in the first year of life and in subsequent years (up to 4 years of age) increased at a high rate, this is due to the growth and development of the organs of the thoracic cavity and their functions.

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IMPROVING COST ACCOUNTING IN HEALTH FACILITIES

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Abstract: This article considers the procedure for the development and solution of a number of methodological and organizational and technical tasks related to the correct calculation and control of expenditures in health care facilities, the allocation of state budget funds and their targeted use. and methodologically researched. There are scientific proposals and practical recommendations on the problems of improving the cost accounting in health care institutions and their solutions.

Keywords: Expenditure accounting in health facilities, cost estimates, funds of medical institutions, extra-budgetary funds, financial control, basic operating expenses, non-operating expenses.

Introduction

One of the main tasks of accounting in budget organizations is the correct calculation and control of expenditures. Expenditures of the state budget are economic relations arising in connection with the distribution of public funds and its orientation to sectoral, target and regional goals. It was resolved by the Resolution of the President of the Republic of Uzbekistan dated August 21, 2017 "On further improvement of the mechanism of improvement of educational and medical institutions and the system of state financial control." [1]

Accounting in business entities is somewhat complex and is determined by the accounting of the generation of funds and its expenditure. In budget organizations, accounting is organized on the basis of the approved budget, control over the expenditure of budget funds is carried out. Therefore, one of the main tasks of accounting in budget organizations is the precise control of accounting and expenditures. Public budget expenditures are economic relations related to the distribution of public funds and their targeted use.

It is well known that fixed assets are key values that serve efficiency in most manufacturing industries. Because product production is directly related to fixed assets. In the field of services, we can see that fixed assets are not in high demand, and most costs are not related to fixed assets. However, there are areas where their main job is service, but they use direct fixed assets efficiently and consistently. The use of the most modern and highly efficient fixed assets in this field leads to high efficiency. One such area is the health sector.

In order to improve the health care system, the Decree of the President of the Republic of Uzbekistan dated December 7, 2018 "On comprehensive measures to radically improve the health care system of the Republic of Uzbekistan" PF-5590 identifies promising areas for developing a health care development strategy. [2]

Development of the concept of development of the health care system of the Republic of Uzbekistan in 2019-2025 in order to create a conceptually new models of financing and organization of the health care system that will radically increase the quality, efficiency and popularity of health care, the introduction of modern advances in medical science and technology aimed at reforming the system.

Literature review

If the purpose of accounting is to provide external and internal users with accurate, complete and reliable information in a timely manner, its tasks are to ensure that the information in enterprises and organizations is reliable, complete and timely. Therefore, in accounting, it is advisable to keep records based on these objectives.

Accounting in business entities is a bit more complicated, it is determined by the accounting of income and its expenditure. In budget organizations, accounting is organized on the basis of the approved budget, control over the expenditure of budget funds is carried out.

It should be noted that one of the main tasks of accounting in budget organizations is the precise control of accounting and expenditures. Public budget expenditures are economic relations related to the distribution of public funds and their targeted use.

Studies have shown that different opinions have been expressed by researchers and scholars on accounting in budget organizations and its main tasks. Including, A.V. Fedotov emphasizes that one of the main tasks of accounting in budget organizations is precise control of expenditures. In his view, budget expenditures are manifested by specific types of material, labor, and monetary resources, the accounting and economic nature of which can be qualitatively and quantitatively described. Qualitative characteristics allow us to establish the overall purpose of each type of expenditure, which is of an economic nature, and their quantitative value. [3]

L.P. Speaking about the costs of health facilities, Kurochkina said that accounting and reporting of expenses in medical institutions is one of the most difficult areas of accounting, which consists of different types of activities, ie budgetary and extra-budgetary expenditures. [4]

In general, the issue of cost accounting is constantly relevant and makes it necessary to organize it taking into account the specifics of each industry or sector. Therefore, there are different opinions among scholars on how to keep track of costs by grouping them. For instance, S.V. Sverdlik said the following costs:

- the cost of packaging the finished product;
- the cost of delivering the product;
- the cost of loading and unloading to transport;
- the cost of paid to intermediary enterprises;
- the cost of to store the product in the oven and in the cottage;
- the cost of wages paid to the seller;
- the cost of to analyze the product before shipment;
- the cost of advertising;
- the cost of government and other such kind of costs.

L.V. Eyxlep [6] said the following groups of costs by type of activity, main activity costs, the costs related to product development and selling, bringing the products and purchasing them.

I.T. Abdukarimov proposes to divide the costs into 2groups, i.e. the main activity costs and other costs. [7]

The author describes the activities:

- the cost of goods, works and services sold;
- commercial prices incurred during the reporting period;
- management expenses during the reporting period;

Other expenses include expenses related to investment, financial activities and other activities. N.M., Paxnovskaya, D.A. Ishchanova recommends to study as the financial, material and temporary expenses. [8]

Based on the fact of finding by P.Kholbekov, he proposes to cover the hijab of

bonification and refraction in the grain processing plant. He was given a lot of bonification - the incentive to the supplier of goods, and refraction punished him financially. However, while the incentive to recognize the supplier of the content is recognized as an insult to the company, its recognition as a material punishment is not sufficiently justified. [9]

M.B. Kalonov, on the other hand, recommends to organize the account by dividing the expenses into expenses related to the activity of the enterprise and non-expenses related to the activity, recommending the classification of expenses taking into account the nature of the industry and sectors.

The author should include in the costs associated with the activities of the enterprise the costs incurred to carry out the planned, targeted activities. It is recommended that such costs include operating expenses, investment operating expenses, financial operating expenses, and other operating expenses. It is stated that operating expenses should be divided into operating expenses and other operating expenses, and operating expenses should include other operating expenses not related to the main activities, taking into account the costs of the main type of activity, depending on the nature of the enterprise.

It is noted that if the main operating costs include costs that make up the cost of goods sold, other operating costs should include costs that are allowed by law, not related to normal activities, i.e. such costs include costs of financial activities, investment activities. It recommends that unplanned, non-targeted expenses be included in non-operating expenses.

Z. Kurbanov, A. Olimov in order to develop production costs in industrial enterprises in accounting and reporting are divided into the following groups according to its directions: [10]

- by economic elements of costs;
- costs by calculation items;

N. Shanasirova emphasizes the need to develop a method of assessing the moral obsolescence of fixed assets in the accounting and reporting of expenditures of health facilities. To do this, it is advisable to carry out the following stages of work each year:

- Development of a separate standard for the period of use of each medical fixed asset, which should establish measures and standards for the write-off on the sanitary and hygienic condition of the fixed asset, even if it can be used;
-determination of the norm of use of medical fixed assets;
- emphasizes the need to take measures to determine the level of obsolescence of fixed assets in medical institutions[11]

Analysis and results

The procedure for consideration, approval and registration of expenditure estimates of organizations allocated to the state budget of the Republic of Uzbekistan on budget allocations and estimates of revenues and expenditures on extra-budgetary funds, as well as drawing up and registration of staffing tables. According to this procedure, the basic concepts are used:

- expenditure estimate - a document prepared and approved by the organization for the current financial year, which reflects the funds allocated from the budget for the organization of expenditure items (expenditure plan);
- estimates of extra-budgetary funds - a document prepared and approved by organizations for the current fiscal year, which reflects the forecast volumes of extra-budgetary revenues, indicating the sources of formation and directions of use of these funds in accordance with the law;
- expenditure item - is part of the budget classification and represents the economic purpose of the State budget expenditures and specific types of payments;
- temporary cost estimates - a document valid until the approval and registration of

cost estimates of organizations, approved by the Order of the Minister of Finance of the Republic of Uzbekistan dated October 29, 2010 No 92 "Drafting, review, approval and cost estimates of organizations Regulation on the procedure for registration" was registered by the Ministry of Justice on November 19, 2010 No. 2157. It reflects the budget allocations (expenditure plan) for budget organizations in the amount of not more than one third of the budget allocations for the last quarter of the previous fiscal year on a monthly basis, taking into account changes in the legislation; - Extra-budgetary funds of budget organizations - funds received at the disposal of organizations at the expense of extra-budgetary sources provided by law.

Develops and approves the staffing table in accordance with the approved organizational structure, staffing units, model staffing, and budget funding standards. All additional costs incurred in the process of budget execution will be amended in the cost estimates of organizations in the manner prescribed by law. Production figures for the next year will be reported in writing.

The calculation of expenditures on cost estimates is carried out taking into account the indicators of economic and social development in accordance with the need for funds and the implementation of a strict order of economy. It is advisable to follow the following when calculating costs:

- Laws of the Republic of Uzbekistan, other resolutions of the Oliy Majlis of the Republic of Uzbekistan, decrees of the President, resolutions and orders of the Cabinet of Ministers of the Republic of Uzbekistan, departmental normative acts of the Ministry of Finance of the Republic of Uzbekistan;
- normative method of expenditure planning of budget organizations;
- prices and tariffs for goods and services regulated by the state, as well as prices for certain goods and services of non-governmental enterprises and organizations;
- Instructions and proposals of the heads of ministries, departments of the Republic of Uzbekistan and the Republic of Karakalpakstan, heads of departments and divisions of the relevant the government on the preparation of cost estimates for the next year, if they do not contradict the legislation.
- Funds for work in the cost estimate are based on budget salaries and wage rates and their additional payments, compliance with applicable standard staffs and standards. Wages for work performed by the economic method are included in the estimates based on the volume of work provided for in the cost estimates for the budget year;
- The cost of treatment in health facilities, meals in children and other socio-cultural organizations is calculated based on the number of meals per day for certain types of organizations approved by law;
- the cost of medicines is determined by the norm of monetary costs established by law: in hospitals - every place per day, in hospitals - for each visit to the doctor, unless otherwise provided by law;
- Expenditures for the purchase of clothing, footwear, bedding, bedding and other soft items for certain groups of socio-cultural organizations are carried out on the basis of the norms of the current norms of material supply, but within the allocated funds;

Organizations that have the status of a legal entity and have other sources of reimbursement in addition to budget expenditures also make estimates of additional revenues and expenses arising from them. The health sector has a special place in a socially oriented market economy. World experience shows that the health care system works effectively with various forms and organizational and legal structures of medical institutions.

The above indicators show that the expenditure of funds allocated from the state budget to the health care system is mainly due to the allocation of funds to budget

organizations.

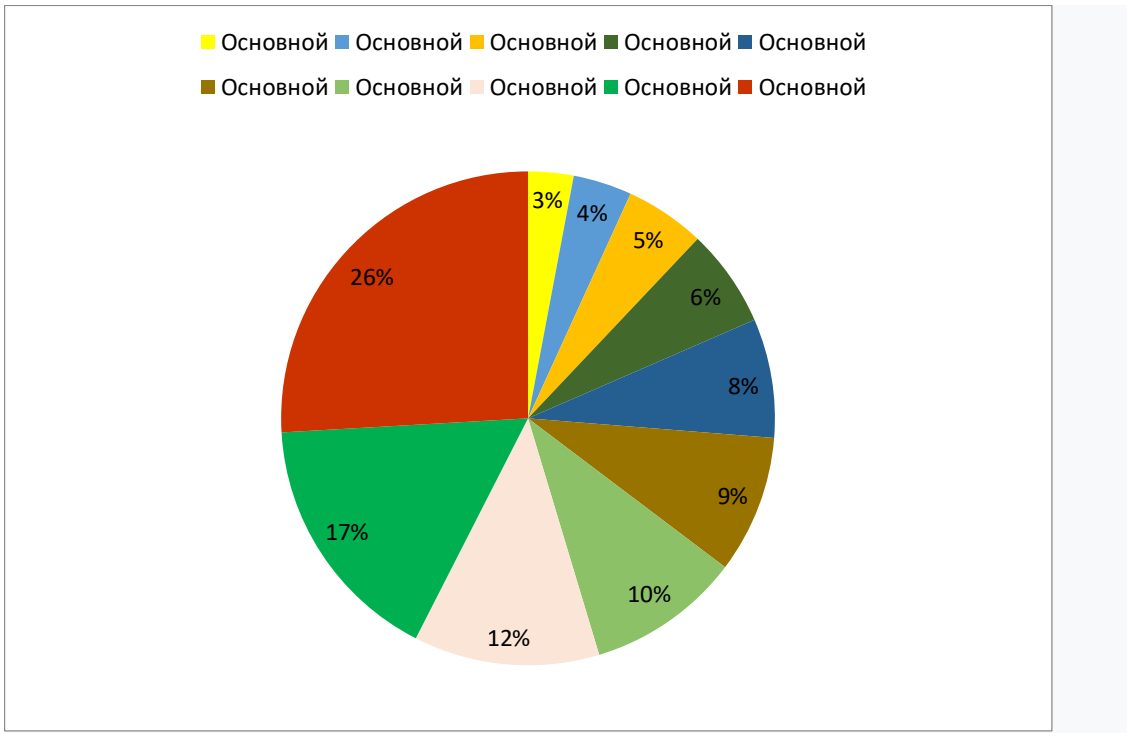

Figure 1. Expenditure of funds allocated by the state to the health care system

For example, in 2010 1716.5 billion sums were allocated, in 2019 this figure will be 14977.4 billion sums. That is, in 2019 we can see an increase of 114.6% compared to 2010. This indicates that the state is focused on health care. Ensuring the targeted and rational use of these funds and the formation of relevant information on them is carried out on the basis of the organization of accounting in them.

Thus, based on the above data, the main purpose of ensuring uninterrupted financial control in the health care system is to make more efficient use of financial resources allocated by the state to provide medical care to the population.

The purpose of such financial control is clear, if we aim to increase the efficiency of the health care system in our country. It turns out that this quality is associated with the qualification of staff, technological superiority, the constant introduction of innovations, as well as the proper organization of activities such as financial control. In the structure of the state budget expenditures in our country, the amount of expenditures allocated to the health care system is also regularly mentioned in the State Budget expenditures, including Table 1 for 2016-2018, total expenditures and expenditures for the social sphere and social support.

Table 1
Total costs and social sphere and population social support expenditures (billion sums)

Indicators	Years		
	2016	2017	2018
Social sphere and social support of the population	22 766,0	27 009,3	34 664,0
Education	13 831,7	15 979,6	19 504,3
Health	5 811,6	7 330,0	9 562,0
Culture and sports	460,6	750,2	1 165,4
Science	238,2	275,5	389,3
Social security	161,1	435,3	714,0
Social benefits, financial assistance and compensation payments	2 043,2	2 238,4	3 150,8
Total costs	40 911,3	49 343,7	62 170,0

As can be seen from Table 1, the social sector and social support expenditures allocated from the State Budget have a steady upward trend from 2016 to 2018. The share of health care expenditures has also been steadily increasing. The largest share of post-education expenditures in the social sphere and social support belongs to the health system, which in 2016 increased from 5 811.6 billion sums to 9 562.0 billion sums in 2018, i.e. the share of total expenditures increased from 14.2% We can see an increase of 15.4 percent.

Funds of medical organizations are formed at the expense of:

- income from financial incentives and development of medical institutions;
- funds allocated from the budget in the amount of up to 5% of the total budget allocated to medical organizations;
- income from the sale of goods (works, services) in the field of activity;
- savings on the cost estimate at the end of the last business day of the reporting quarter.
- part of the proceeds from the lease of the property on the balance sheet of the medical organization;
- funds left at the disposal of the budget organization in the prescribed manner;
- is formed at the expense of funds received from sponsorship.

In our view, it is necessary to reflect each type of revenue that is accounted for in a specific analytics that allows the revenue and expenditure estimates to be monitored and the use of the funds received to be used for the intended purpose. Above, we have considered the issue of accounting for revenues and expenditures in health care facilities, which are provided from the budget. However, medical institutions in our country are also finding their place in the private sector. In private medical institutions, accounting is carried out in the same way as for business entities. That is, the problem with this is rare.

Studies have shown that there are some challenges in co-financing health facilities. Such problems are related to co-financing, i.e. the simultaneous allocation of funds from the budget and the receipt of funds from paid services.

In most cases, the costs are covered by the budget, and some costs are self-financing.

Conclusions and suggestions

Based on the above, the following conclusions were drawn:

1. It is advisable to keep separate records of expenditures, including expenditures from paid services and expenditures from the budget;

2. Purchase, repair and other expenses of fixed assets and other valuables should also be made taking into account the source of funds from services;

3. It is necessary to develop a method of assessing the spiritual obsolescence of fixed assets in the field of medicine.

To do this, it is advisable to carry out the following stages of work each year:

- development of separate norms for the period of use of each medical fixed asset, which should establish measures and standards for write-off on the sanitary and hygienic condition of the fixed asset, even if it can be used;
- determination of the norm of use of the main medical means;
- to take measures to determine the level of obsolescence of fixed assets in medical institutions.

The implementation of our proposals will lead to a clear and complete accounting of costs in the co-financing of medical institutions, the effective use of funds.

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THE IMPORTANCE OF ANXIETY-DEPRESSIVE DISORDERS IN THE DEVELOPMENT OF A NUMBER OF GASTROENTEROLOGICAL DISEASES

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Abstract. Concomitant depression and anxiety disorders occur in 25% of general practitioners. About 85% of depressed patients have significant anxiety, and 90% of patients with anxiety disorder have depression. Both depressive disorder and specific anxiety disorder require appropriate treatment. Psychological therapies such as cognitive behavioral therapy and antidepressants, sometimes supplemented with antipsychotics, have proven beneficial for treating both depression and anxiety.

Keywords: neurosis; depression; stress; dyspepsia

Over the previous 65 years, the incidence of neuroses in industrially developed countries increased 24 times, including anxiety-depressive disorders amounted to 21.8-38.9% with a significant predominance of them in women (3-4: 1) (Smaardijk VR, Mommersteeg PMC , Kop WJ, Adlam D, 2020). WHO experts predict that by 2020 depression will rank second among the causes of disability after coronary heart disease.

In the general population, the frequency of depressive disorders is 10.7%, and in hospitals for somatic patients it reaches 27.1%. However, only 10% of patients with anxiety-depressive disorders are observed by psychiatrists, and most of them (65%) - by general practitioners; 25% of patients never see a doctor at all. Thus, depression has recently moved beyond the scope of psychiatry and has become a general medical problem. Among the alleged reasons for the growth of depressive states are psychoemotional and psychosocial stress. The causes of stress are diverse: a serious illness, a conflict situation in a work team or family, the loss of loved ones, serious financial difficulties, unexpected negative changes in life (forced change of place of residence or nature of work, etc.). Stress includes emotional, cognitive, autonomic and somatic reactions [1,2,4,7].

The importance of the problem of depressive states is that they significantly reduce the quality of life and adaptation of patients, cause or aggravate the disorder of the

functions of internal organs, and contribute to the exacerbation of pathological processes in the body. The connection between the psyche and the somatic is two-way. Mental disorders affect somatic functions (somatic mental disorders, somatic "resonance" of mental disorders, somatic "masks" of depression), and somatic diseases, in turn, affect the state of the psyche (somatogenic mental disorders). A special place belongs to psychosomatic diseases and syndromes. Psychosomatic diseases (syndromes) with a certain reason include: o gastric ulcer and duodenal ulcer; o functional (gastroduodenal) dyspepsia syndrome; o irritable bowel syndrome (mainly colon); ulcerative colitis; Crohn's disease; part of the functional forms of chronic duodenal insufficiency syndrome; chronic cholecystitis (mainly acalculous) and functional disorders of the sphincter apparatus of the extrahepatic biliary tract, etc. Psychovegetative syndrome plays an important role in the formation of psychosomatic diseases. With prolonged and intense psychoemotional stress, especially in the presence of a genetic predisposition and hypochondriacal fixation on vegetative syndromes, conditions are created for the development of psychosomatic suffering. Modern psychosomatic medicine does not attach importance to psychogenic influences as the only and decisive factor in the etiology and pathogenesis of somatic diseases, supporting the concept of polyetiology of human diseases. Recognizing the existence of aclose relationship between the emotional life of aperson and the nature of his somatic disorders, psychosomatic medicine studies the living conditions of an individual, his personality traits, the nature of interpersonal relationships, as well as the influence of the social environment on human mental health and the development of somatic diseases. Anxiety-depressive syndrome and peptic ulcer disease. One of the most common gastroenterological diseases associated with mental disorders is peptic ulcer, which affects up to 10% of the world's adult population under the age of 60. Attention has long been drawn to the relationship of peptic ulcer disease with an increased level of anxiety (Koloski N, Holtmann G, Talley NJ., 2020). In particular, the influence of anxiety and depression on the rate of ulcer healing was noted. It was found that generalized anxiety disorder increases the risk of developing peptic ulcer disease by 2.2 times, and the severity of symptoms of generalized anxiety disorder correlates with the clinical symptoms of peptic ulcer disease. It is important to note that peptic ulcer disease is the only medical condition that increases the risk of generalized anxiety disorder by 2.8 times. It is emphasized that there is acausal relationship between generalized anxiety disorder and peptic ulcer disease, or there are common genetic and environmental predisposing factors Koloski N, Holtmann G, Talley NJ., 2020. (Among the psychopathological syndromes in duodenal ulcer disease dominate: simple asthenic (22%), asthenic-depressive (30%) and asthenic-subdepressive (14%). In 68% of cases of peptic ulcer disease develops in people in whose representation the stomach is the most Significant organ Depression and functional (gastroduodenal) dyspepsia syndrome In functional dyspepsia syndrome symptoms of vegetative dystonia are observed: fatigue, decreased ability to work, sleep disturbance, increased sweating, fever, orthostatic disorders, periodic feeling of lightheadedness, semi-fainting.

Most authors studying the syndrome of functional dyspepsia associate the appearance of symptoms of gastric dyspepsia with the somatization of anxiety-depressive disorders. Thus, J. Richter et al. (2012) revealed in patients with functional dyspepsia syndrome increased anxiety, signs of autonomic dysfunction, and B. Cash - the presence of insufficiently adapted mental reactions, manifested by anxiety and depression, which are combined with epigastralgia and gastric dyspepsia. Depression and irritable bowel syndrome. One of the most substantiated hypotheses for the pathogenesis of irritable bowel syndrome is the biopsychosocial theory of its origin (Van den Houte K, Colomier E, Schol J, Carbone F, Tack J., 2020). Some authors tend to consider irritable bowel

syndrome as a psychosomatic pathological process that develops in people with more or less pronounced mental disorders. Symptoms of irritable bowel syndrome indicate a violation of the central and peripheral regulation of intestinal functions: "brain-gut disorder". According to the biopsychosocial theory, psychoemotional and psychosocial stresses play a decisive role in the development of irritable bowel syndrome, which have a negative impact on psychological, biological and somatic processes in the body [1,3,5,8,9,11,13].

Depression and functional forms of chronic duodenal insufficiency syndrome. The syndrome of chronic duodenal insufficiency is characterized by difficulty in moving the food chyme along the duodenum, delaying its evacuation to the lower parts of the small intestine. There are organic and functional forms of chronic duodenal insufficiency syndrome. The latter are divided into primary-functional (idiopathic) and secondary-functional, complicating the course of a number of diseases associated with the duodenal organs (stomach, pancreas, hepatobiliary system, etc.). It is important to emphasize that with functional forms of chronic duodenal insufficiency syndrome in the duodenum there are no organic (mechanical) obstacles to the transit of duodenal contents. In the syndrome of chronic duodenal insufficiency, the pathological process is localized in the duodenum, which is the focus of the nervous and hormonal mechanisms of regulation of the functions of the organs of the gastroduodenocholangiopancreatic system, and therefore functional disorders of the duodenum inevitably affect the activities of neighboring organs. A group of psychiatrists and surgeons, having studied the mental status of patients with primary functional forms of chronic duodenal insufficiency syndrome, found that in a significant part of cases they develop as a result of psychoemotional stress and anxiety-depressive syndrome.

Depression and pathology of the biliary system (chronic cholecystitis and associated dyskinesias of the extrahepatic biliary tract). The importance of anxiety-depressive disorders in the development and course of XX has been noted for a long time. Suffice it to recall the expression that has entered into everyday use about the "bilious character", which speaks of a quarrelsome, irritable, sarcastic person. Doctors of antiquity singled out people with a choleric temperament (from chole - bile), who were distinguished by imbalance, incontinence, and a tendency to unjustifiably violent reactions. In chronic cholecystitis, the emotion of anxiety, irritable weakness, a tendency to introspection, "withdrawal into illness", less often demonstrativeness, prevail. These changes in the psyche are due to both external psychogenic factors and somatogenic influences. Chronic cholecystitis usually occurs with asthenic-depressive syndrome. Along with depression and asthenia, these patients have anxiety and agitation.

Treatment. In addition to the basic individualized therapy of somatic diseases, many patients need additional prescription of psychotropic drugs.In addition, these patients require psychological support. It is important to provide psychological contact between the doctor and the patient, explain to him the essence of the development of a psychosomatic disease (syndrome) and its relationship with psycho-emotional stress, increased anxiety, emphasize that anxiety-depressive disorder is not a natural response to stress, but a painful condition that requires treatment. The main method of treating anxiety-depressive disorders is psycho-, less often hypnotherapy. Currently, in case of peptic ulcer disease, the method of gestalt psychotherapy, developed by F. Perls, is successfully used - a method of reconstructive psychotherapy aimed at bringing a person to maturity and integrity of his own "I". Only when psychotherapy is ineffective do they resort to prescribing psychotropic drugs.

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