8. Sposob mineralizatsii emali zubov: A. s. 1017334 SSSR. Borovskiy E.V., Volkov E.V. 1986; 34330556/28–13; Opubl. 15.05.86. [in Russian]
9. Kui AI, Labunet AJ, Popescu C, Popa D, Lascu L. Dentists' perspectives on the choice of treatment of teeth with apical periodontitis. Clujul Med. 2018; 91(1): 98–103. doi: 10.15386/cjmed-789.
10. Robledo JG. Apical Periodontitis Treatment: Surgical - Non surgical? J Oral Hyg Health. 2013; 1:e104. doi: 10.4172/2332-0702.1000e104
11. Shrestha S, Kishen A. Temporal-controlled bioactive molecules releasing core-shell nano-system for tissue engineering strategies in endodontics. Author links open overlay panel. https://doi.org/10.1016/j.nano.2019.02.013.
12. Siqueira JF, Rufas IN, Ricucci D, Hylsmann M. Causes and management of post-treatment apical periodontitis. British dental journal official journal of the British Dental Association: BDJ online. 216(6):305 doi: 10.15386/cjmed-78912. doi: 10.1038/sj.bdj.2014.200.

Стаття надійшла 28.12.2020 р.

DOI 10.26724/2079-8334-2022-1-79-103-108
UDC 616.366-089.87-072.1-055.26-:616.98:578.834.1

V.V. Mishchenko, V.P. Mishchenko, P.I. Pustovoit[1], R.Yu. Vododiuk, V.V. Velichko, V.K. Likhachev[2], L.M. Dobrovolska[2]
Odessa National Medical University, [1]Odessa Regional Clinical Hospital, Odessa
[2]Poltava State Medical University, Poltava

THE ROLE AND PLACE OF LAPAROSCOPIC CHOLECYSTECTOMY IN PREGNANT WOMEN WITH A HISTORY OF COVID–19

e-mail: vladimir.lihachev@gmail.com

The purpose of the study was to determine the role and location of laparoscopic cholecystectomy in pregnant women with a history of COVID–19. 19 pregnant women underwent surgery. The mean age of pregnant women was 27±4.9 years. In the post-Covid period, clinical manifestations of the disease appeared in the first two days. Pregnant women who have had Covid-19 and patients with cholelithiasis and acute calculous cholecystitis have clinical manifestations of the disease in the form of hemolysed blood in the abdominal cavity and vesicular rashes on the visceral and parietal peritoneum, which sometimes merged into conglomerates and bled on contact. Pathomorphologically, the changes in the gallbladder wall were phlegmonous or gangrenous in nature. Diagnosis of this pathology in pregnant women who have had COVID–19 should be rapid and accurate. Cholecystectomy should be performed before developing complications of gallstone disease and acute calculous cholecystitis. In the postpartum period in pregnant women, laparoscopic cholecystectomy should become the "gold standard" of surgical treatment.

Key words: gallstone disease, calculous cholecystitis in pregnant women, postpartum period, cholecystectomy, laparoscopy.

В.В. Міщенко, В.П. Міщенко, П.І. Пустовойт, Р.Ю. Вододюк, В.В. Величко, В.К. Ліхачов, Л.М.Добровольська

РОЛЬ І МІСЦЕ ЛАПАРОСКОПІЧНОЇ ХОЛЕЦИСТЕКТОМІЇ У ВАГІТНИХ, ЯКІ ПЕРЕХВОРІЛИ НА COVID–19

Метою дослідження було визначення ролі і місця лапароскопічної холецистектомії у вагітних, які перенесли COVID–19. Прооперовано 19 вагітних. Середній вік вагітних склав 27±4,9 років. У постковідному періоді клінічні прояви захворювання проявлялися у перші дві доби. У вагітних, що перенесли Covid–19, та хворих на жовчнокам'яну хворобу і гострий калькульозний холецистит, є клінічні прояви хвороби у вигляді гемолізованої крові у черевній порожнині та везикулярних висипань на вісцеральній і парієтальній очеревині, які місцями зливались у конгломерати і при контакті кровоточили. Патоморфологічно зміни у стінці жовчного міхура мали флегмонозний або гангренозний характер. Діагностика цієї патології у вагітних, які перенесли COVID–19, повинна бути швидкою і точною. Холецистектомію слід виконувати ще до розвитку ускладнень з боку жовчнокам'яної хвороби та гострого калькульозного холециститу. В післяковідному періоді у вагітних саме лапароскопічна холецистектомія повинна стати «золотим стандартом» оперативного лікування.

Ключові слова: жовчнокам'яна хвороба, калькульозний холецистит у вагітних, постковідний період, холецистектомія, лапароскопія.

The article is a fragment of the research project "Development and implementation of new methods of minimally invasive and endovascular interventions in metabolic syndrome, endocrine pathology, diseases of the lungs, oesophagus, liver and extrahepatic ducts, stomach, pancreas, colon and rectum, blood vessels", state registration no. 0119U003573.

The epidemic of coronavirus infection is accompanied by the emergence of new strains and the defeat of new segments of the population, starting from infants. Pregnant women deserve special attention [4, 9].

Gallstone disease (GSD) with acute calculous cholecystitis (ACC) clinical manifestations is diagnosed in 10–15 % of the human population [1]. According to the literature, GSD is by 2.5 times more common in women than in men [7, 8]. Exacerbation of the chronic process in the biliary system or acute

inflammation is very often observed during pregnancy. It is associated with anatomical, physiological, metabolic changes in the body of a pregnant woman and physico-chemical changes in the composition of bile, neurohumoral and mechanical disorders of the motility of the gallbladder and the entire hepato-pancreato-biliary zone in this contingent of women [1, 3].

As a manifestation of GSD, cholecystolithiasis occurs in 3–12 % of pregnant women. Pregnant women suffering from COVID–19, in the presence of acute surgical pathology in the form of GSD with clinical manifestations of ACC, are hospitalized in specially organized surgical hospitals, where they are provided with specialized surgical care in compliance with all necessary anti-epidemic measures [5, 10]. In most pregnant women, cholelithiasis is asymptomatic or with minimal clinical manifestations, which does not require active treatment, especially given the possible complications of pregnancy or adverse effects on fetal development. However, some patients require active surgical treatment due to the development of complications, which can pose a threat to the pregnancy and fetus [6, 13]. Patients, including pregnant women, who have already had COVID-19 and are in the so-called post-Covid period, in the case of GSD with signs of exacerbation or acute calculous cholecystitis, are hospitalized in conventional surgeries for surgical care and require special care in diagnostic and therapeutic tactics [9, 12, 14].

ACC in pregnant women leads to pathomorphological changes in the biliary system and other abdominal organs [2, 11]. An atypical clinical picture of ACC with the impaired motor-evacuatory function of the intestine and gallbladder [14] characterizes the course of GSD in pregnant women in the post-Covid period. Blood stasis in the vessels of the hepatobiliary zone, dilatation of the gallbladder due to impaired bile flow lead to inflammatory and destructive changes in the wall of the organ [14].

Pregnant women with GSD in the post-Covid period complain of nausea, sometimes vomiting and vague pain both throughout the abdomen and in the right hypochondrium, epigastric region, which are characteristic of ACC, which is difficult to differentiate from the complaints that are sometimes observed during pregnancy itself [5, 8]. In addition, pregnant women with GSD and ACC in the post-Covid period are characterized by changes in the immune system, hormonal changes, and signs of hypercoagulation. All this leads to increased frequency of destructive forms of ACC and complications in the postoperative period [9].

Laparoscopic cholecystectomy, which is the "gold standard" of surgical intervention in pregnant women for GSD with signs of ACC, is performed on average 1–2 days after hospitalization [6, 7, 8]. At the same time, the enlarged uterus creates difficulties for operations on the gallbladder and bile ducts, and computed tomography to clarify the diagnosis is harmful to the fetus [1, 5, 10].

Diagnosis of acute calculous cholecystitis, the choice of optimal treatment tactics in pregnant women with GSD with signs of ACC who have suffered COVID-19, are complex and require further study to develop explicit algorithms for diagnosis and treatment [1, 5, 6].

The purpose of the study was to determine the role of laparoscopic cholecystectomy in pregnant women with gallstone disease complicated by acute calculous cholecystitis who underwent COVID–19.

Materials and methods. Twenty-four pregnant women with GSD and ACC who relapsed COVID–19 were hospitalized in the Department of Minimally Invasive Interventions of the Odessa Regional Clinical Hospital within 15 to 30 days from the moment of clinical recovery from COVID infection.

In 20 (84.2 %) pregnant women, the diagnosis of ACC was confirmed using ultrasound of the abdominal cavity.

Ultrasound was performed on an Acuson XP 128 ultrasound scanner with a transducer with an operating frequency of 3.5 MHz. Endoscopic examination was performed in the dynamics of the treatment of patients with the Olympus JF–1T10 fibroduodenoscope.

Preoperative and intraoperative antibiotic prophylaxis of infectious complications with protected penicillins was mandatory. We used Clexane in the complex conservative treatment of ACC at a 4000 anti-Xa MO (0.4 mL) dose two times a day subcutaneously for five days. Conservative therapy was used to prolong pregnancy when clinical signs of threatened abortion appeared.

The therapeutic measures complex necessarily included dexamethasone therapy at 4 mg i.m. for 5 days in the postoperative period according to the recommended protocols [4, 13].

In 5 women (20.8 %), the attack of acute calculous cholecystitis was eliminated by conservative methods. Laparoscopic cholecystectomy was performed in 19 pregnant women (79.2 %).

Laparoscopic cholecystectomy was performed using the Olympus OTV–SC endosurgical complex. We performed endotracheal anaesthesia at a pressure of carbon dioxide in the abdominal cavity of 10–12 mm Hg. The Sorometrics 170 Series monitor (Finland) determined the fetal condition.

Laparoscopic cholecystectomy in pregnant women required the correct choice of laparoscopic operative approaches. As a rule, these are three trocar approaches, which localization depends on the gestational age.

Until the 14th week of pregnancy, carbon dioxide insufflation into the abdominal cavity was performed at the classic Olym point 2 cm below the navel, along the midline of the abdomen, after opening the skin transversely to 1 cm through a Veress needle. The first port for a video camera was installed with a 10-mm trocar. If necessary, for the first trocar, we used the Hasson open laparoscopy method – the trocar was inserted along the midline 2 cm below the navel through an incision of the anterior abdominal wall under visual control. A second port with a 5–10 mm diameter was installed in the right hypochondrium, laterally to the mid-clavicular line. The third port with a diameter of 10 mm was installed under the xiphoid process along the midline.

In the second trimester of pregnancy, the first trocar was inserted along the midline 3-4 cm above the height of the bottom of the pregnant uterus through an incision using the Hasson open laparoscopy method. The 2nd port was installed in the right hypochondrium, laterally to the mid-clavicular line. The 3rd port with a diameter of 10 mm was established under the xiphoid process along the median line or to its right under the control of a video camera.

In the third trimester of pregnancy, the longer the gestation period, the closer the ports were applied to the right hypochondrium. A fourth auxiliary port with a diameter of 5 mm was placed in the right hypochondrium. A laparoscopic clamp was inserted for a more detailed revision of the hepatobiliary area.

Coagulation is bipolar in standard exposure modes. The surgery was completed by installing safety drainage in the right hypochondrium to the gallbladder bed.

The obtained results were processed using the MS Excel XP software package, Statistica 6.0 using the Student's parametric criterion. Differences were significant at $p<0.05$.

Results of the study and their discussion. We studied the time frame in which patients were ill with COVID–19 and ACC, the severity of the disease, clinical manifestations, duration of the illness, therapy, anamnestic data, laboratory parameters.

The age of pregnant women ranged from 18 to 36 years (on average, 27±4.9 years). The gestation period ranged from 9 to 39 weeks, with one patient (4.2 %) in the first trimester of pregnancy, 11 (45.8 %) in the second trimester, and 12 women (50.0 %) in the third trimester of pregnancy. Thus, in pregnant women who had a history of COVID–19, the incidence of ACC mainly manifested itself in the second and third trimesters.

The duration of the main symptoms of the disease before hospitalization up to 24 hours was noted in 4 pregnant women (16.7 %), from 25 to 48 hours – in 16 pregnant women (66.7 %), more than 48 hours – in 4 pregnant women (16.7 %). For ACC in post-pregnancy pregnant women, clinical manifestations of the disease manifested themselves in the first two days before hospitalization in 83.3 % of cases.

In 4 (16.7 %) pregnant women, the duration of preoperative follow-up, diagnosis and treatment was more than 12 hours. In 20 (83.3 %) pregnant women, diagnosis of GSD with ACC and preparation for laparoscopic cholecystectomy required from 6 to 12 hours.

The results obtained indicate a high percentage of preoperative hospital follow-up for up to 12 hours in patients with GSD and ACC. They have had COVID-19, despite the problematic diagnosis of ACC in the post-Covid period.

Pathomorphological changes in the removed gallbladder due to acute calculous cholecystitis in pregnant women who had a history of COVID–19 were characterized by the presence of phlegmonous inflammation in 63.2 % of cases gangrenous – in 21.1 %. Catarrhal changes were detected only in 3 (15.8 %) cases.

Analysis of laboratory parameters in pregnant women with GSD with ACC who underwent COVID-19 is presented in table 1.

In pregnant women diagnosed with GSD and ACC on the background of COVID infection, clinical signs of anaemia were confirmed in the laboratory by determining haemoglobin, ferritin, and erythrocytes (table 1).

The presence of an inflammatory process and its severity in pregnant women with GSD and ACC who have had a history of COVID–19 is indicated by leukocytosis and ESR in a detailed blood test. Patients were characterized by elevated levels of fibrinogen and platelets – signs of hypercoagulation. COVID infection was accompanied by a slight increase in bilirubin content without clinical manifestations of jaundice and increased liver function tests on the background of GSD and ACC.

Elevated creatinine levels were diagnosed in 20 % of GSD patients with ACC who had COVID-19 and had asymptomatic bacteriuria.

Table 1

Laboratory parameters in the post-Covid period before surgery – initial data (n=24)

Laboratory parameters (reference values)	Mean rates for the group of patients
Hemoglobin, g/L	102±5.5
Ferritin, ng/mL	9.8±0.49
Red blood cells, 10^{12}/L	2.75±0.15
Platelets, 10^{9}/L	434±11.5
White blood cells, 10^{9}/L	22.4±0.25
Lymphocytes, %	27±1.05
ESR, mm/h	42±1.9
Fibrinogen, g/L	5.8±0.24
Total bilirubin, μmol/L	22.6±1.03
ALT, units/L	45±2.05
AST, units/L	39±1.9
Creatinine, μmol/L	114±5.6

A previous COVID infection is indicated by M and G antibodies to SARS Cov-2 (COVID-19), which were determined in 100 % of cases from 15 to 30 days after the transferred COVID disease (table 2).

Table 2

Laboratory diagnostics of PCR RNA Coronavirus 2019-nCoVSARS-CoV (n=24)

Laboratory parameters	Frequency, %
PCR in the post-disease period of RNA Coronavirus 2019 – nCoVSARS-CoV (detected)	100
IgGSARSCov–2 (COVID–19) Antibodies (positivity coefficient > or = 1.0 – positive)	100
IgMSARSCov–2 (COVID–19) Antibodies (coefficient of positivity – positive)	100
PCR test for SARSCov–2 (COVID–19) (detected)	100

At the time of hospitalization for GSD and ACC, all patients underwent PCR testing for SARSCov–2 (COVID–19). The test was 100 % positive in the absence of clinical manifestations of COVID disease. RNA determination of coronavirus 2019-nCoVSARS–CoV in clinically healthy pregnant women who have had COVID-19 was regarded as a post-Covid syndrome in patients.

During surgery in 2 (10.5 %) patients, findings revealed a small amount of hemolyzed blood in the right hypochondrium and vesicular rash on the visceral and parietal peritoneum up to 0.5 cm in size, which sometimes merged into conglomerates and bled on contact.

During the pathomorphological study of the removed gall bladders, it was found that in pregnant women with GSD and ACC, in the post-Covid period, changes in the gallbladder wall had a phlegmonous or gangrenous character, which indicates immune disorders in the body of a sick pregnant woman and may explain her high sensitivity to the banal infectious process [4].

In pregnant women with GSD and ACC, who had a history of COVID–19, the postoperative period was 2–5 days. No complications were observed in the early postoperative period. There were no fatalities.

In 18 (94.7 %) cases among operated women, pregnancy ended with physiological labor through the natural birth canal within 37 to 41 weeks. Intrauterine growth retardation, acute or chronic fetal distress were not observed. Caesarean section was performed according to obstetric indications in 1 (5.3 %) woman. The connection between the indications for cesarean section and laparoscopic cholecystectomy has not been established.

Children were born with an Apgar Score of 7 to 9 points and a weight of 2.750 to 3.900 grams.

We have not established any contraindications to laparoscopic cholecystectomy in patients with GSD and ACC in the post-Covid period.

In pregnant women who have had a covid infection, GSD with ACC is characterized by “volatile” pain in the right hypochondrium with radiation to the right subscapular and right supraclavicular areas, nausea, sometimes vomiting, bitterness in the mouth, subfebrile temperature, leukocytosis with a shift of the leukocyte formula to the left and ultrasound data. Similar complaints can be observed in early toxicosis of pregnant women, severe preeclampsia, HELLP-syndrome [5].

Antibiotic prophylaxis of infectious complications, prevention of thromboembolic complications and hormone therapy should be carried out in pregnant women with GSD and ACC. They have had COVID–19, with caution, especially in the early stages of pregnancy [10].

Surgery (laparoscopic cholecystectomy) should be performed under endotracheal combined anaesthesia with carbon dioxide pressure in the abdominal cavity at the level of 10–12 mm Hg. The location of trocars is determined by the need to adhere to the basic principle of triangulation [1, 6].

Given the blurred clinical picture of GSD complicated by ACC the inability to fully use instrumental and radiation research methods in pregnant women in the post-Covid period, the diagnosis of GSD and ACC is difficult. The choice of treatment tactics also requires a balanced approach. It is not fully understood how to assess the situation if 15 days – 4 weeks after recovery from COVID–19 in pregnant women with GSD and ACC in the presence of IgMSARSCov–2 (COVID–19) and IgGSARSCov–2 (COVID–19) antibodies, a PCR test for the presence of RNA residues of the virus is determined in 100 % of cases. Is this situation dangerous for other patients and staff? It is likely that in such cases, the basic anti-epidemic principles of treating patients with COVID-19 should be observed.

Among the features of clinical manifestations of GSD with ACC in pregnant women who are in the post-Covid period, it should be noted the presence of hemolysed blood in the abdominal cavity and vesicular rashes on the visceral and parietal peritoneum, which sometimes merged into conglomerates and bled upon contact. Pathomorphologically, it was established that in pregnant women with GSD and ACC, in the post-Covid period, changes in the gallbladder wall were phlegmonous or gangrenous [7, 8].

Thus, laparoscopic cholecystectomy in pregnant women with GSD and ACC who have a history of COVID–19 allows to eliminate acute surgical pathology (acute calculous cholecystitis), avoid excessive trauma to the anterior abdominal wall, abdominal organs, uterus, achieve more minor injuries to cellular structures and faster recovery of impaired functions of the body of the pregnant woman and fetus. This promotes a favourable postoperative period in pregnant women and reduces the possibility of premature termination of pregnancy.

Conclusions

1. In pregnant women who have had COVID–19, the diagnosis of cholelithiasis and acute calculous cholecystitis should be rapid and accurate, based on anamnestic data and examinations obtained before pregnancy, complaints, objective analysis at the time of hospitalization using other imaging technologies only in the form of ultrasound.

2. In such pregnant women, cholecystectomy should be performed before developing complications of gallstone disease and acute calculous cholecystitis by reducing the duration of the diagnostic phase and making a timely decision on surgery.

3. Pregnant women with cholelithiasis and acute calculous cholecystitis who have suffered Covid–19 have post-Covid disease manifestations in the form of hemolysed blood in the abdominal cavity vesicular rashes on the visceral and parietal peritoneum, which sometimes merged into conglomerates and bled on contact. Pathomorphological changes in the gallbladder wall were phlegmonous or gangrenous, which can be explained by the influence of a previous Covid infection.

4. Laparoscopic cholecystectomy, due to its advantages over open cholecystectomy, is a guarantee of safety for the health of the pregnant woman and the course of pregnancy. It should be the gold standard for gallstones and acute calculous cholecystitis surgery in pregnant women who have undergone COVID-19.

Prospects for further research are aimed at studying the features of laparoscopic surgery in pregnant women who underwent COVID-19, for other acute surgical pathology.

References

1. Kolomiytsev VI. Maloinvazivne likuvannya vahitnykh iz hostroyu pankreatobiliarnoyu patolohiyeyu. Naukovyy visnyk Uzhhorodskoho universytetu, seriya “Medytsyna”. 2011; 2 (41): 99–101. [in Ukrainian]
2. Barton LM, Duval EJ, Stroberg E, Ghosh S, Mukhopadhyay S. COVID-19 Autopsies, Oklahoma, USA. Am. J. Clin. Pathol. 2020; XX:1-9 https://doi org/10.1093/ AJCP/AQAA062.
3. Becker RC. COVID-19 update: COVID-19-associated coagulopathy [published online ahead of print, 2020 May 15]. J. Thromb. Throbolysis. 2020; 1–14. Doi:10.1007/s11239-020-02134-3. https://link.springer.com/article/ 10.1007/s11239-020-02134-3.
4. COVID-19: Clinical management, WHO, 25.01.2021, https://www.who.int/publications/i/item/WHO-2019-nCoV-clinical-2021-1.
5. Devall AJ, Coomarasamy A. Sporadic pregnancy loss and recurrent miscarriage. Best Practice & Research: Clinical Obstetrics & Gynaecology. 2020; 69, 30–39; doi: 10.1016/j.bpobgyn.2020.09.002. Epub 2020 Sep 8.
6. European Association for Endoscopic Surgery and other Interventional Techniques. Category: COVID-19 Statements. Available at: https://eaes.eu/category/covid-19-statements.
7. Gomes CA, Junior CS, Di Saverio S, Sartelli M, Kelly MD, Gomes CC et al. Acute calculous cholecystitis: Review of current best practices. World J. Gastrointest. Surg. 2017; 9(5): 118–126. https://doi.org/10.4240/wjgs.v9.i5.118.
8. Hall BR, Armijo PR, Krause C, Burnett T, Oleynikov D. Emergent cholecystectomy is superior to percutaneous cholecystostomy tube placement in critically ill patients with emergent calculous cholecystitis. Am. J. Surg. 2018; 216(1): 116–9. https://doi.org/10.1016/j.amjsurg.2017.11.002
9. Lei S, Jiang F, Su W, Chen C, Chen J, Mei W et al. Clinical characteristics and outcomes of patients undergoing surgeries during the incubation period of COVID-19 infection. EClinicalMedicine. 2020; 21: 100331. https://doi.org/10.1016/j.eclinm.2020.100331.
10. Meshikhes AN. Successful laparoscopic cholecystectomy in the third trimester of pregnancy. Saudi Med. J. 2008; 2(29): 291–292.
11. Moletta L, Pierobon ES, Capovilla G, Costantini M, Salvador R, Merigliano S et al. International guidelines and recommendations for surgery during Covid-19 pandemic: A Systematic Review. Int. J. Surg. 2020; 79: 180–8. https://doi.org/10.1016/j.ijsu.2020.05.061

12. Pryor A. SAGES and EAES recommendations regarding surgicalresponse to COVID-19 crisis. Society of American Gastrointestinaland Endoscopic Surgeons, 2020 March 29. Available at: https://www.sages.org/recommendations-surgical-response-covid-19/.
13. The Royal College of Surgeons of England. Updated Intercollegiate General Surgery Guidance on COVID-19. Available at: https://www.rcseng.ac.uk/coronavirus/joint-guidance-for-surgeons-v2.
14. Ti LK, Ang LS, Foong TW, Ng BSW. What we do when a COVID-19 patient needs an operation: operating room preparation andguidance. Can. J. Anaesth. 2020; 67 (6): 756–8. DOI: 10.1007/s12630-020-01617-4.

Стаття надійшла 30.01.2021 р.

DOI 10.26724/2079-8334-2022-1-79-108-112
UDC 303.621.3: 616.728.2-001.6-053.1

D.A. Nasirli
Azerbaijan Medical University, Baku, Azerbaijan

RISK FACTORS FOR THE DEVELOPMENT OF PATHOLOGICAL PROCESSES IN THE STRUCTURES OF THE HIP JOINT

e-mail: medstatnauka@mail.ru

The study included 160 patients with coxarthrosis of the III-IV radiological stages aimed at a total hip replacement for the period 2015–2018. Several variants of the course of the disease were identified, taking into account the age factor (group I), the post-traumatic factor (group II), the metabolic factor (group III) and the polyethological nature of the process (group IV). The number of patients in each group was 40 people. Upon admission to the hospital, all patients underwent a comprehensive examination using instrumental, physical, clinical, functional and laboratory research methods. The presence of excess body weight was determined based on BMI. In the presence of an age-related risk factor, coxarthrosis manifested much later than with the development of joint pathology of post-traumatic, metabolic and poly etiological genesis. Of the somatic diseases, arterial hypertension was most often found in patients with coxarthrosis, chronic heart failure, diabetes mellitus and varicose veins of the lower extremities were somewhat less common. When analyzing the incidence of diseases of the genitourinary system, chronic pyelonephritis was diagnosed in most cases. Hyperglycemia of 17.5 %and 37.5 %, respectively, were often diagnosed in these two groups, and the fasting glucose level was 5.3±0.06 mmol/l. It should be noted that there were no disorders in the functional state of the thyroid gland in patients of the second group.

Key words: corsarthrosis, prevalence, age, etiology, risk factors

Д.А. Насірлі

ФАКТОРИ РИЗИКУ РОЗВИТКУ ПАТОЛОГІЧНИХ ПРОЦЕСІВ У СТРУКТУРАХ ТАЗОСТЕГНОВОГО СУГЛОБУ

До дослідження було включено 160 пацієнтів із коксартрозом III-IV рентгенологічних стадій, спрямованих на тотальне ендопротезування кульшового суглоба за період 2015–2018 років. Було виділено кілька варіантів перебігу захворювання з урахуванням вікового фактора (I група), посттравматичного фактора (II група), метаболічного фактора (III група) та поліетиологічного характеру процесу (IV група). Кількість пацієнтів у кожній групі становила 40 осіб. Всім хворим під час вступу до стаціонару проводили комплексне обстеження із застосуванням інструментальних, фізикальних, клініко-функціональних та лабораторних методів дослідження. Наявність надлишкової маси тіла визначалося на підставі індексу ІМТ. За наявності вікового фактора ризику коксартроз маніфестував значно пізніше, ніж при розвитку суглобової патології посттравматичного, метаболічного та поліетіологічного генезу. З соматичних захворювань найчастіше у пацієнтів з коксартрозом виявлялися артеріальна гіпертонія, дещо рідше – хронічна серцева недостатність, цукровий діабет та варикозне розширення вен нижніх кінцівок. При аналізі частоти захворювання сечостатевої системи, в більшості випадків діагностувався хронічний пієлонефрит. У хворих з віковим та посттравматичним типом суглобової хвороби нерідко діагностувалася гіперглікемія 17,5% та 37,5%, відповідно, а рівень глюкози натще склав 5,3±0,06 ммоль/л.

Ключові слова: корсартроз, поширеність, вік, етіологія, фактори ризику

Diseases of the musculoskeletal system that have a negative impact on the health indicators of the population, an increase in their prevalence, an increase in the level of disability and disability over the past decade in almost all age and gender groups, as well as significant losses in socio-economic and psychological spheres, all this indicates the relevance of this problem for practical and scientific medicine. Analyzing world statistics, it can be argued that more than half of the world's population represent risk groups for diseases of the musculoskeletal system, in particular joint diseases with a clear tendency to increase epidemiological indicators [8]. The reason for the lack of sometimes due attention from public health specialists to this issue can be considered insufficient data on the prevalence of the pathology under study in each population in most countries of the world and the lack of comparable data obtained in different regions on the degree of influence of diseases of the musculoskeletal system on the main indicators of the quality of life of patients [10]. At the same time, the implementation of regular examinations makes it possible to identify the incidence of the disease among various groups and strata of the population and to