

12. Rittenschöber-Böhm J, Waldhoer T, Schulz SM, Pimpel B, Goeral K, Kasper DC et al. Vaginal *Ureaplasma parvum* serovars and spontaneous preterm birth. *Am J Obstet Gynecol* 2019;220: 594.e1–9. DOI: <https://doi.org/10.1016/j.ajog.2019.01.237>.
13. Siniakova AA. Current views on vaginal microbiota and its impact on pregnancy outcomes. *Journal of Obstetrics and Women's Diseases*. 2017;66(6):89–100. doi: 10.17816/JOWD66689-100
14. Waikhom SD, Afeke I, Kwawu GS, Mbroh HK, Osei GY, Louis B et al. Prevalence of vulvovaginal candidiasis among pregnant women in the Ho municipality, Ghana: species identification and antifungal susceptibility of *Candida* isolates. *BMC Pregnancy Childbirth*. 2020 May 6;20(1):266. doi: 10.1186/s12884-020-02963-3.

Стаття надійшла 27.11.2021 р.

DOI 10 26724/2079-8334-2022-4-82-123-128

UDC 618.3–6:616.37–002.1]–07–08

V.V. Mishchenko, V.P. Mishchenko, I.V. Rudenko, P.I. Pustovoyt¹, V.K. Likhachov²,
L.M. Dobrovolska², O.G. Makarov²
Odessa National Medical University, Odessa, ¹Odessa Regional Clinical Hospital, Odessa,
²Poltava State Medical University, Poltava

DIAGNOSTIC AND TREATMENT APPROACHES TO ACUTE PANCREATITIS IN PREGNANT WOMEN

e-mail: vladimir.lihachev@gmail.com

The frequency of acute pancreatitis is from 1:1500 to 1:10000 pregnancies. The purpose of the study was to improve diagnostic and treatment approaches for acute pancreatitis in pregnant women. 21 pregnant women who were diagnosed with acute pancreatitis were under supervision. The diagnosis of acute pancreatitis in pregnant women was based on the Atlanta classification criteria (2013). Complex conservative treatment of acute pancreatitis in pregnant women consisted of prescribed octreotide, proton pump inhibitors, in the II trimester – protease inhibitor/semi-synthetic penicillins, cephalosporins of the III-IV generations. It is necessary to correct the water-electrolyte balance, compensate for plasma loss, microcirculation disorders, fight against edema of the pancreas and parapancreatic tissue. The course of acute pancreatitis in pregnant women in 52.4 % of cases was characterized by an average and severe degree of severity, which was accompanied by distress and the threat of fetal death. There were no fatalities. The implementation of the diagnostic and treatment approaches used by us in acute pancreatitis in pregnant women made it possible to avoid mortality, surgical and obstetric-perinatal complications. Management of pregnant women with acute pancreatitis is an extremely difficult task and primarily depends on the severity of acute pancreatitis in pregnant women. The management of pregnant women suffering from acute pancreatitis requires a multidisciplinary approach to predict the course of pancreatitis, determine the tactics of managing pregnancy and acute pancreatitis in pregnant women, the method and timing of delivery.

Key words: management of pregnant women, acute pancreatitis, multidisciplinary approach.

**В.В. Міщенко, В.П. Міщенко, І.В. Руденко, П.І. Пустовойт, В.К. Ліхачов,
Л.М. Добровольська, О.Г. Макаров**

ДІАГНОСТИЧНІ ТА ЛІКУВАЛЬНІ ПІДХОДИ ДО ГОСТРОГО ПАНКРЕАТИТУ У ВАГІТНИХ

Частота виникнення гострого панкреатиту складає від 1:1500 до 1:10000 вагітностей. Мета дослідження полягала у вдосконаленні діагностичних та лікувальних підходів при гострому панкреатиті у вагітних. Під наглядом була 21 вагітна жінка з гострим панкреатитом. Постановка діагнозу гострого панкреатиту у вагітних ґрунтувалась на критеріях класифікації Atlanta (2013). Комплексне консервативне лікування гострого панкреатиту у вагітних полягало у призначенні октреотиду, інгібіторів протонної помпи, у II триместрі – інгібіторів протеаз, напівсинтетичних пеніцилінів, цефалоспоринів III–IV поколінь. Слід проводити корекцію водно-електролітного балансу, відшкодування втрати плазми, порушень мікроциркуляції, боротьбу з набряком підшлункової залози та парапанкреатичної клітковини. Перебіг гострого панкреатиту у вагітних у 52,4 % випадків характеризувався середнім та тяжким ступенем тяжкості, що супроводжувалось дистресом плода. Летальних випадків не було. Впровадження застосованих нами діагностичних та лікувальних підходів при гострому панкреатиті у вагітних дозволило уникнути летальності, хірургічних та акушерсько-перинатальних ускладнень. Ведення вагітних із гострим панкреатитом є вкрай складним завданням і в першу чергу залежить від ступеня тяжкості гострого панкреатиту у таких хворих. Ведення вагітних, які хворіють на гострий панкреатит, вимагає мультидисциплінарного підходу для прогнозування перебігу панкреатиту, визначення тактики ведення вагітності при цьому, способу і термінів розродження.

Ключові слова: ведення вагітних, гострий панкреатит, мультидисциплінарний підхід.

The study 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, esophagus, liver and extrahepatic ducts, stomach, pancreas, colon and rectum, blood vessels”, state registration No. 0119U003573.

According to various authors, the frequency of acute pancreatitis in pregnant women (APP) ranges from 1:1,500 to 1:10,000 pregnancies [1, 2, 9]. As a result of certain difficulties in diagnosis and imperfection in the choice of treatment tactics, management of pregnancy and the timing of delivery, APP significantly threaten the health of the mother and fetus and testify to the lack of specific recommendations [4, 5, 6].

The problem is multidisciplinary and requires the involvement of surgeons, obstetricians, gynecologists, gastroenterologists, and, if necessary, other specialists [7, 8, 9]. The course of APP can be mild with the absence of organ failure and local or systemic complications. With acute pancreatitis (AP) of moderate severity, temporary organ failure, local or systemic complications are observed. With a severe course of AP, permanent organ failure is noted. In most cases, the diagnosis of AP is based on the presence of severe pains that are of a girdling nature, the activity of serum amylase, lipase, the level of which is 2–3 times higher than normal indicators, and characteristic signs of AP when using transabdominal ultrasonography, contrast computer tomography, and magnetic resonance imaging. It should be noted that x-ray research methods are contraindicated or sharply limited in pregnant women [5, 7, 11].

The presence of leukocytes deserves special attention in the diagnosis of APP ($>10 \times 10^9/l$) and other signs of SIRS, increased levels of lactate dehydrogenase, alkaline phosphatase, γ – glutamyltransferase, direct bilirubin, urea and creatinine, triglycerides (≥ 11.3 mmol/l), presence of hyperglycemia (≥ 7.8 mmol/l), hypocalcemia (serum calcium < 1.75 mmol/l) [9, 10, 15]. Distress and fetal loss of the fetus develops with a severe course of APP and an average degree of severity from 25.0 % to 60.0 %. Obstetrical and surgical management of patients with APP has not been sufficiently reflected in the available literature. The questions about the expediency of preserving the pregnancy, the intrauterine state of the fetus, the terms and methods of termination of pregnancy come to the fore [2, 6, 13].

Conservative therapy of APP is carried out in intensive care units. Surgical treatment of APP is indicated for pancreatic necrosis, while sterile pancreatic necrosis, pancreatic pseudocysts do not require immediate intervention regardless of their size [1, 2, 5]. Surgical intervention is indicated in the presence of an infected septic focus.

In the stable condition of pregnant women with infected pancreatic necrosis, the operation should be postponed from when symptoms appear [3, 8, 12].

Surgical intervention is indicated when conservative therapy of acute cholecystitis is ineffective, complications such as peritonitis, mechanical jaundice are present with acute biliary pancreatitis in pregnant women. Indications for immediate termination of pregnancy are AP of medium and severe severity, multiple organ failure, shock, consumption coagulopathy, abscess, sepsis, widespread pancreatic necrosis, hemorrhagic pancreatic necrosis, persistent paralytic intestinal obstruction [6, 13, 14]. The decision on the tactics of pregnancy management is made in favor of management of mother's health and life in the case of fetal distress in the period of gestation from 22 to 26 weeks.

Urgent delivery with monitoring of the intrauterine state of the fetus is indicated at 28–30 weeks of pregnancy. A caesarean section is performed together with a surgeon, which allows, if necessary, to perform the necessary surgical interventions for pancreatitis [1, 9, 11]. It is advisable to improve the early diagnosis of acute pancreatitis in pregnant women, to define and improve the therapeutic obstetric, conservative and surgical tactics in this regard.

The purpose of the study was to improve the diagnostic and treatment approaches for acute pancreatitis in pregnant women.

Materials and methods. 21 pregnant women diagnosed with acute pancreatitis were admitted to Odesa Regional Clinical Hospital over the past three years. They were examined together with obstetrician-gynaecologists. Treatment of pregnant women with APP of moderate and severe severity was carried out in the intensive care unit. The diagnosis of AP is made on the basis of the Atlanta (2013) classification criteria [1, 4], of severe pains that have a girdling or spreading character throughout the abdomen, increased activity of serum amylase and lipase, characteristic signs of AP when using ultrasonography. Contrast computed tomography and magnetic resonance imaging were used in 5 (23.8 %) cases of severe AP. The presence of leukocytosis, signs of SIRS, increased levels of lactate dehydrogenase, alkaline phosphatase, γ – glutamyltransferase, direct bilirubin, urea and first weight, triglycerides, the presence of hyperglycemia, hypocalcemia are characteristic and indicate the severity of the course of APP. We used in the complex conservative treatment of APP: 1. Octreotide is a synthetic analogue of endogenous somatostatin, is used in the presence of severe pain syndrome and hyperfermentemia to suppress pancreatic secretion in pregnant women, 50–100 μ g subcutaneously 3 times a day for 3–5 days. 2. Proton pump inhibitor (PPI) parenterally (for example, pantoprazole 40 mg intravenously in 100 ml of physical solution once a day) before switching to oral nutrition, after which they switch to oral administration of the same PPI in as short a bite as possible. 3. Intravenous fractional administration of the protease inhibitor aprotinin is permissible, usually for no more than 3 days in the II trimester, if there are indications. 4. Semisynthetic penicillins, cephalosporins of the III–IV generations, metronidazole in standard doses were prescribed for the prevention or treatment of infectious complications and at the stage of septic manifestations of severe AAP. The indication for the appointment of antibacterial drugs is not absolute with mild and moderate severity of the disease. 5. Correction of the water–electrolyte balance and compensation of plasma loss (at least 40 ml of infusions per 1 kg of body weight with a ratio of colloidal and crystalloid solutions

– 1:4). 6. Correction of microcirculation disorders (with caution, rheopolyglucin 200 ml). 7. Fight against edema of the pancreas and parapancreatic tissue (mannitol, furosemide parenterally). 8. Symptomatic therapy according to indications – non-narcotic or narcotic (except morphine!) analgesics (analgin, ketorol, tramadol, pentazocine, promedol), myotropic spasmolytics (drotaverine, papaverine hydrochloride) or prokinetics, lytic glucose–novocaine mixture, antihistamines parenterally.

Pregnant women with AP accompanied by dynamic intestinal obstruction were fed parenterally and enteral nutrition. An epidural catheter was installed for the introduction of carbostezin 0.25 %, 5–10 mg/h. Ciprofloxacin, imipenem, and metronidazole in standard doses were prescribed at the stage of severe septic manifestations of APP. Clexan was used in a dose of 4000 anti-Xa IU (0.4 ml) 2 times a day subcutaneously for 5 days. Also, this group of pregnant women was prescribed hormonal drugs (dexamethasone, progesterone, ginipral) [1, 9, 13]. Laparoscopic cholecystectomy was performed according to the standard technique. The obtained results were processed using the methods of mathematical statistics using the Student's parametric criterion.

Results of the study and their discussion. The age of the patients ranged from 18 to 42 years, the average age was 28 ± 2.1 years, the gestation period was 12– 13.7 weeks (Table 1).

Table 1

Main characteristics of the course of APP (n=21)

Characteristics of pregnant women	Indices
Age, years	28±2.1
Pregnant for the first time	7 (33.3 %)
Pregnant again	14 (66.7 %)
Pregnancy period (n=21)	
Trimester I	6 (28.6 %) pregnant women
Trimester II	5 (23.8 %) pregnant women
Trimester III	10 (47.6 %) pregnant women
Time from onset of illness to hospitalization	
within 24 hours	3 pregnant women (14.3 %)
25–48 hours	16 pregnant women (76.2 %)
more than 48 hours	2 pregnant women (9.5 %)
Terms of diagnosis at the hospital stage (n=21)	
More than 12 hours	2 pregnant women (9.5 %)
Up to 12 hours	5 pregnant women (23.8 %)
Up to 6 hours	14 pregnant women (66.7 %)
Degree of severity of the course of APP(n=21)	
Lung	10 pregnant women (47.6 %)
Average	6 pregnant women (28.6 %)
Heavy	5 pregnant women (23.8 %)
Causes of APP (n=21)	
Biliary pancreatitis	11(52.4 %)
Alimentary pancreatitis	7(33.3 %)
Other reasons Other reasons	3(14.3 %)

Acute pancreatitis was detected in 7 (33.3 %) pregnant women for the first time, 14 (66.7 %) cases were pregnant again. AP developed 2.0 times more often in repeat pregnancies. There is an alimentary factor in the development of acute pancreatitis in pregnant women as a rule, in most cases. It is known that most pregnant women allow themselves various food products that can cause the occurrence or exacerbation of AP. Acute pancreatitis was detected in 6 (28.6 %) pregnant women in the 1st trimester, 5 (23.8 %) – in the 2–nd trimester, and 10 (47.6 %) – in the 3–rd trimester. Hypertension in pregnant women occurs more often in the third trimester. The period of appearance of the main symptoms of the disease before hospitalization was noted to be up to 24 hours in 3 pregnant women (14.3 %), from 25 to 48 hours – in 16 pregnant women (76.2 %), more than 48 hours – in 2 pregnant women (9.5 %). Clinical manifestations of AP in 90.5 % of pregnant women manifested in the first two days before hospitalization. This indicates late hospitalization of pregnant women with AP. APP of mild degree of severity was diagnosed in 10(47.6 %), medium – in 6(28.6 %), severe – in 5(23.8 %). The course of APP in 52.4 % of cases was characterized by a medium and severe degree of severity, which was accompanied by distress and the threat of fetal death and required a decision to be made on urgent delivery with the priority of preserving the life of the mother. Among the causes of APP, the first place should be given to gallstone disease (GSD), which was diagnosed in 11(52.4 %) pregnant women, of which 5(45.5 %) had a severe course. GSD was accompanied, according to the anamnesis, by exacerbation of chronic cholecystitis, cholecystopancreatitis in 6 out of 11 pregnant women (54.5 %). Such patients were treated conservatively by doctors or self–medicated.

Types of surgical interventions in pregnant women with AP is presented in Table 2.

Types of surgical interventions for APP (n=21)

Types of surgical interventions for APP	Indices
Endoscopic retrograde cholangiopancreatography	3
Papillosphincterotomy with removal of a stone from the choledochus	2
Endoscopic drainage of the choledochus	3
Through the skin drainage of an enlarged gallbladder	1
Through the skin through the hepatic drainage of the biliary duct system of the liver	2
Simultaneous intervention – cholecystectomy + caesarean section	1
Cesarean section	10
Laparoscopic cholecystectomy in the remote postpartum period	10

In order to diagnose and examine the biliary duct system of the liver, endoscopic retrograde cholangiopancreatography was performed in 3 cases of pregnant women, which made it possible to establish the correct diagnosis. The presence of stones in the duct system of the liver was diagnosed in 2 cases. Such patients underwent papillosphincterotomy with removal of a stone from the choledochus using a Dormia basket. Endoscopic choledochal drainage was performed with the establishment of internal choledochoduodenal drainage in 3 cases, in the presence of papillitis. Such a manipulation made it possible to unblock the outflow of bile and pancreatic juice into the 12 – duodenum.

Skin drainage of an enlarged gallbladder was performed in one case, as one of the stages of preparation for cesarean section and cholecystectomy. This intervention helped to eliminate the inflammatory process in the gallbladder and more carefully carry out obstetric measures in relation to both the mother and the intrauterine patient. Through the skin through the liver drainage of the ductal system of the liver was used in order to unblock the biliary system in 2 cases, which made it possible to eliminate hypertension in the ductal system of the liver and helped in the treatment of AP.

The course of HP of moderate and severe severity with progressive fetal distress was diagnosed in 11(28.6 %) pregnant women, at a period of more than 22 weeks of pregnancy, which was an absolute indication for delivery by caesarean section. Simulative intervention – cesarean section + cholecystectomy was performed in 1 pregnant woman with acute calculous phlegmonous cholecystitis after cesarean section. After suturing the wound of the uterus and its peritonization to reduce the risk of infection of the uterus, they proceeded to a cholecystectomy, which was performed from an oblique mini-access in the right hypochondrium, with drainage of the choledochus according to Pikovsky in view of the fact that the patient had signs of biliary pancreatitis.

The laparoscopic cholecystectomy was performed in 10 out of 11 pregnant women in whom the cause of APP was GSD at different times after delivery after the elimination of inflammatory phenomena in the pancreas.

Clinical signs of anemia were characteristic of pregnant women diagnosed with AP, which were confirmed in the laboratory by the results of determination of hemoglobin and erythrocytes. The presence of an inflammatory process in pregnant women with AP is evidenced by the presence of leukocytosis, elevated erythrocyte sedimentation rate (ESR), C-reactive protein, and lactate dehydrogenase.

In 5 (23.8 %) pregnant women with AP were diagnosed with elevated levels of C-reactive protein and signs of SIRS, which were manifested by the presence of two or more criteria: heart rate > 90 bpm; temperature < 36° C or > 38° C; the level of leukocytes in the blood <4000 or >12000/mm³; breathing >20/min or CO₂ partial pressure <32 mm Hg. Art. For pregnant women with AP, elevated levels of fibrinogen and platelets were characteristic – signs of hypercoagulation, which required the appointment of clexan at a dose of 4000 anti-Xa IU (0.4 ml) 2 times a day subcutaneously for 5 days. APP with an increase in the content of both total bilirubin and its direct fraction with manifestations of jaundice was noted in 2 (9.5 %). APP is characterized by increased functional tests of the liver and increased levels of alpha-amylase, lipase, lactate dehydrogenase, alkaline phosphatase, and γ -glutamyltransferase, which indicates the development of liver failure.

Elevated levels of creatinine and urea were diagnosed in 4 (19.0 %) pregnant women with AP who had asymptomatic bacteriuria and indicated the onset of organ failure – the development of acute renal failure. Increased levels of triglycerides, the presence of hyperglycemia, hypocalcemia were correlated with the severity of the clinical course of App. A high level of triglycerides diagnostically indicates acute pancreatitis, which arose as a result of a violation of metabolic processes. Hypocalcemia plays a significant role in the pathogenetic mechanisms of AP.

The state of hypocalcemia in pregnant women is caused by the loss of calcium, which is transferred to the fetus through the placenta. Hyperglycemia to one degree or another accompanies the course of APP and this fact should be kept in mind when carrying out treatment measures. There were no deaths in

pregnant women who had AP. Bed-day was 5 ± 1 days with a mild degree of severity of the course of AP, with a moderate degree of severity – 6 ± 1 days. Pregnant women who gave birth by caesarean section on the background of AP spent an average of 6 days in the hospital after the operation.

The drainage from the choledochal was removed 4 weeks after the operation in a patient who underwent a simulative caesarean section and cholecystectomy with choledochal drainage according to Pikovsky. The pregnancy ended with physiological birth through the natural birth canal between 37 and 41 weeks in 10 (47.6 %) cases. Intrauterine development delay, acute or chronic fetal distress was not observed. Newborns were born with an Apgar score from 7 to 9 points, weighing from 2750 to 3900 grams. The obtained data testify to the effectiveness of the diagnostic and treatment approaches used by us in pregnant women who developed acute pancreatitis.

The clinical course is characterized by girdling or diffuse pain, signs of HP on transabdominal ultrasonography in pregnant women with AP. [1, 4, 7]. The attention should be paid to the presence of leukocytosis, signs of SIRS, increased levels of serum amylase, lipase, lactate dehydrogenase, alkaline phosphatase, γ – glutamyltransferase, total and direct bilirubin, creatinine, urea, triglycerides, hyperglycemia, hypocalcemia to determine the severity of the course of APP [9, 10, 15].

Antibiotic therapy, prevention of thromboembolic complications should be carried out in pregnant women with AP [2, 5, 11]. Conservative therapy should be carried out according to protocols. The course of APP, which is characterized by a medium and severe degree of severity and is accompanied by distress and the threat of fetal death, is an indication for delivery by cesarean section at a period of more than 22 weeks of pregnancy [3, 8, 12].

According to strict indications, endoscopic retrograde cholangiopancreatography, papillosphincterotomy with stone removal from the choledochus, endoscopic drainage of the choledochus, percutaneous drainage of the gallbladder, percutaneous hepatic drainage of the biliary system should be performed [3, 7]. Timely diagnosis makes it possible to start specific treatment of acute pancreatitis in time. Cesarean section+cholecystectomy for biliary pancreatitis should be performed according to strict indications. The laparoscopic cholecystectomy should be performed at different times after delivery after the elimination of inflammatory phenomena in the pancreas in the case of APP and GSD. [6, 14]. The implementation of the diagnostic and treatment approaches used by us for APP allowed to avoid mortality, surgical and obstetric–perinatal complications.

Conclusions

1. The management of pregnant women with AP requires the application of the proposed complex conservative treatment algorithm depending on the severity of APP.
2. Treatment and diagnostic measures in pregnant women with AP require a multidisciplinary approach to predict the course of pancreatitis, determine the tactics of pregnancy management and APP, the method and timing of delivery. In the case of medium and severe APP, termination of pregnancy is indicated up to 22 weeks, after 22 weeks – delivery by caesarean section.
3. Implementing our proposed algorithm of diagnostic and treatment approaches for APP made it possible to avoid mortality, surgical and obstetric–perinatal complications.

Prospects for further research are aimed at studying the peculiarities of treatment and diagnostic approaches for intestinal obstruction in pregnant women.

References

1. Golyanovskiy OV, Feleshtinskiy JP, Pavliv TP, Goncharenko DO. Vedennya vahitnosti ta rozrozhennya zhinok na tli hostroho pancreastu. Zdorovye zhenshchiny. 2018;6(132):74–80. [in Ukrainian]
2. Zabolotnov VO, Yakovenko EV, Shatylo VY, Khvatova OO, Segedina YP, Zabolotnov VO. Vid hostroho pancreastu do pankreonekrozu pid chas vahitnosti. Ohlyad literatury. Reproductive endocrinology. 2020;6(56):64–72. DOI: <http://dx.doi.org/10.8370/2309-4117.2020.56.64-72>. [in Ukrainian]
3. Altraigey A, Asiri M. Acute Pancreatitis during Pregnancy: A Case Report Austin. J. Obstet. Gynecol. 2018;5.7:1120.
4. Berezna VA, Gromova AM, Mamontova TV, Udovyt'ska NO, Starchenko II, Vesnina LE. Morphometric analysis of placental and M1/M2 macrophages polarization in the detection of fetal growth restriction. Svit medyt'syny ta biolohiyi. 2021;1(75):12–17. DOI 10.26724/2079-8334-2021-1-75-12-17
5. Devall AJ, Coomarasamy A. Sporadic pregnancy loss and recurrent miscarriage. Best Practice & Research: Clinical Obstetrics & Gynecology. 2020; 69,30–39;doi: 10.1016/j.bpobgyn.2020.09.002.
6. Gardner T. Acute pancreatitis and pregnancy. Available from: <https://pancreasfoundation.org/patient-information/acute-pancreatitis-and-pregnancy/>, last accessed Feb 21, 2020.
7. Huang C, Liu J, Lu Y, Fan J, Wang X, Lui J, et al. Clinical features and treatment of hypertriglyceridemia-induced acute pancreatitis during pregnancy: a retrospective study. J. Clin. Apher. 2016;31:571–8.
8. Jeon HR, Kim SY, Cho YJ, Athar S, Joohi Ramawat J, Mohammad Abdel, et al. Hypertriglyceridemia-induced acute pancreatitis in pregnancy causing maternal death. Obstet. Gynecol. Sci. 2016;59:148–51.

9. Kryuchko TO, Nesina IM, Bubyр LM, Tkachenko OYa, Poda OA, Kuzmenko NV, Kryvoshapka LYu. Relationship between indices of cytokine status and pathomorphological changes of the mucosa in children with chronic gastroduodenal pathology. Svit medytsyny ta biolohiyi. 2021; 2(76):69–73. DOI 10.26724/2079-8334-2021-2-76-69-73
10. Lingyu L. Clinical characteristics of acute pancreatitis in pregnancy: experience based on 121 cases. Archives of Gynecology and Obstetrics. 2018; 297:333–9.
11. Mali P. Pancreatitis in pregnancy: etiology, diagnosis, treatment, and outcomes. Hepatobiliary Pancreat. Dis. Int. 2016;15:434–8.
12. Mishchenko VV, Mishchenko VP, Rudenko IV, Likhachov VK, Dobrovolska LM, Vashchenko VL, Makarov OG. Laparoscopic appendectomy during pregnancy. Svit medytsyny ta biolohiyi. 2021; 4 (78):116-120. DOI 10/26724/2079-8334-2021-4-78-116-120.
13. Tang M, Xu J–M, Song Sh–Sh, Mei Q, Zhang L–J. What may cause fetal loss from acute pancreatitis in pregnancy. Analysis of 54 cases. Medicine (Baltimore). 2018;97(7):e9755. DOI: 10.1097/MD.0000000000009755.
14. Vishnu Priya KMN, Sheela CN, Shruti B, Mahalakshmi T. Maternal and perinatal outcome of acute pancreatitis during pregnancy: A 5–year experience at a tertiary care center. Int. J. Reprod. Contracep. Obstet. Gynecol. 2016;5:4041–5.
15. Wong B, Ooi TC, Keely E. Severe gestational hypertriglyceridemia: A practical approach for clinicians. Obstet. Med. 2015;8:158–67.

Стаття надійшла 5.11.2021 р.

DOI 10.26724/2079-8334-2022-4-82-128-132
UDC 616.728.3-089.77

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

SMALL ACCESS SURGERY FOR TOTAL ENDOPROSTHETICS IN PATIENTS WITH DYSPLASTIC COXARTHROSIS

e-mail: medstatnauka@mail.ru

The most promising treatment of dysplastic coxarthrosis is total arthroplasty using mini- and non-invasive surgical access techniques. For a comparative assessment of the effectiveness of total hip arthroplasty using classical and modified surgical approaches, we analyzed the course of the disease in 55 patients with dysplastic coxarthrosis types 1 and 2 according to Hartofilakidis, divided into two groups: control – 25 patients and main – 30 patients. All patients underwent total hip arthroplasty. The results of the treatment were evaluated 6 months and 1 year after the intervention using clinical and radiological methods. Patients were evaluated for disease activity according to the DAS28 index and performed a complete blood count, study of the immune status by determining the serum concentration of C-reactive protein. A comparative analysis of the identified parameters shows that patients of the main group have a significantly more pronounced tendency to a decrease in the content of C-reactive protein at all stages of the postoperative period. When screening for chronic pain syndrome, there was a definite relationship between access technique and disease activity. The use of the proposed minimally invasive surgical approach for total hip arthroplasty in patients with dysplastic coxarthrosis is effective and can significantly reduce the intensity of pain and improve the results of arthroplasty in general.

Key words: dysplastic coxarthrosis, arthroplasty, surgical approach, protein, disease activity

Д.А. Насірлі

ХІРУРГІЧНІ МАЛІ ДОСТУПИ ПРИ ТОТАЛЬНОМУ ЕНДОПРОТЕЗУВАННІ ПАЦІЄНТІВ З ДИСПЛАСТИЧНИМ КОКСАРТРОЗОМ

Найбільш перспективним у лікуванні диспластичного коксартрозу є тотальне ендопротезування із застосуванням міні- та неінвазивних методик хірургічного доступу. Для порівняльної оцінки ефективності тотального ендопротезування тазостегнового суглоба із застосуванням класичних та модифікованих хірургічних доступів було проведено аналіз перебігу хвороби у 55 пацієнтів з диспластичним коксартрозом 1-го та 2-го типів за Hartofilakidis, розділених на дві групи: контрольна – 25 та основна – 30 хворих. Всім хворим виконувалося тотальне ендопротезування кульшового суглоба. Результати лікування були оцінені через 6 місяців та 1 рік після втручання за допомогою клінічного та рентгенологічного методів. У пацієнтів здійснювалася оцінка активності захворювання за індексом DAS28 та виконувався загальний аналіз крові, вивчення імунного статусу визначенням сироваткової концентрації рівня С-реактивного білка. Порівняльний аналіз виявлених параметрів показує, що пацієнти основної групи мали значно більш виражену тенденцію до зниження вмісту С-реактивного білка на всіх етапах післяопераційного періоду. При проведенні скринінгу хронічного больового синдрому був певний взаємозв'язок між методикою доступу та активністю хвороби. Застосування запропонованого мініінвазивного хірургічного доступу при тотальному ендопротезуванні кульшового суглоба у пацієнтів з диспластичним коксартрозом є ефективним і дозволяє суттєво знизити інтенсивність болю та покращити результати ендопротезування загалом.

Ключові слова: диспластичний коксартроз, ендопротезування, хірургічний доступ, білок, активність хвороби

Despite the increase in the number of hip replacement surgeries performed and the specialized centers that perform them, as well as the good functional results achieved at the same time, problems arise when comparing the results and effectiveness of various surgical approaches to the acetabulum, the use of different designs and methods of implantation of artificial joints, which is due to the lack of a single registry of total endoprosthetics and a clear systematization of the articular pathology itself [14]. Hip replacement