



SIMULTANEOUS OPERATION: LIVER ECHINOCOCCOSIS AND SLEEVE RESECTION (CLINICAL CASE)

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Article history:	Abstract:
Received: 6 th December 2022 Accepted: 6 th January 2023 Published: 8 th February 2023	According to our observations and according to the literature, about 20-25% of patients with liver echinococcosis are accompanied by another surgical pathology. Obesity is a major public health problem due to its high prevalence, rising treatment costs and adverse outcomes. Analyzing the problem of liver echinococcosis and in patients with concomitant obesity, according to scientific studies of foreign scientists, we came to the conclusion. We present our clinical case, the patient was scheduled for bariatric surgery in the course of the examination, it was determined with an echinococcal cyst of the liver and a simultaneous operation was performed
Keywords: simultaneous operation, bariatric surgery, gastric sleeve resection, Echinococcus cyst of liver	

RELEVANCE. According to our observations and according to the literature, about 20-25% of patients with liver echinococcosis are accompanied by another surgical pathology. (1) This pathology is mainly the most common cholelithiasis, cysts of various origins of the abdominal and pelvic organs, duodenal ulcer, etc. (2,3)

The Republic of Uzbekistan is the most densely populated region in Central Asia. Unfortunately, our country is an endemic focus of the incidence of echinococcosis (Karimov Sh.I 2004., Akilov Kh.A. 2008., Nazyrov F.G. 2021). Echinococcosis is no longer uncommon in Western Europe, mainly due to the presence of immigrants from endemic countries, and then the hepatologist surgeon must be able to treat this parasitic disease. Echinococcosis is a zoonosis caused by the larval stages of taeniid cestodes belonging to the genus *Echinococcus*. Six species of *Echinococcus* are known, but only four cause disease in humans: *Echinococcus granulosus* (*E. granulosus*) (causing cystic echinococcosis), *Echinococcus multilocularis* (*E. multilocularis*) (causing alveolar echinococcosis), *E. vogeli*, and *E. oligarthrus* (causing polycystic echinococcosis). Recent studies have identified two new species: *E. felidis* and *E. shiquicus*., even if there is no data on their pathogenicity for humans [4,5,6,7].

Obesity is a major public health problem due to its high prevalence, rising treatment costs and adverse outcomes. Despite the fact that obesity has been accompanying mankind since the appearance of man, it was recognized as a disease with certain pathophysiological consequences about 100 years ago [8].

The following are some recent WHO global estimates:

- In 2016, more than 1.9 billion adults over 18 were overweight. Of these, over 650 million were obese.
- In 2016, 39% of adults over 18 (39% of men and 40% of women) were overweight.
- In 2016, about 13% of the world's adult population (11% of men and 15% of women) were obese.
- From 1975 to 2016, the number of obese people worldwide more than tripled.

Of course obesity directly and indirectly leads to numerous diseases of the body. If before they died of hunger, now they die of obesity.

Surgical tactics of liver echinococcosis in patients with obesity remains an unresolved problem of modern surgery. In developed Western countries, liver echinococcosis is rare, but in developing countries like Uzbekistan, liver echinococcosis is quite common. Based on literature data in databases such as PubMed, Cochrane, Medline, Embase, Allied and Complementary Medicine and DH-DATA, we have not found a scientifically based approach to liver echinococcosis in obese patients. The frequency of bariatric surgeries is on the rise due to the fact that obesity is one of the major public health problems. Thus, organic changes associated with bariatrics are a potentially new clinical area of knowledge, and the amount of published data on post-bariatric complications experienced by patients and identified by clinicians is increasing. We reviewed the available literature and summarized various complications and possible recommendations. The search strategy was implemented in the PubMed, Cochrane, Medline, Embase, Allied and Complementary Medicine, and DH-DATA databases to find documents that answered our research question: BARIATRIC SURGERY TECHNIQUES Bariatric surgery (BS) has evolved extensively over the past twenty years and has become the standard treatment for morbid obesity. Procedures for BS may be restrictive or associated with a malabsorptive component. Sleeve gastrectomy (SG), which consists of removing two-thirds of the stomach, is a restrictive operation and is currently the most commonly performed. However, the Roux-en-Y gastric bypass (RYGB) with restrictive and malabsorption remains the reference procedure. a component that affects both weight loss and metabolic complications of obesity (type 2 diabetes mellitus, metabolic syndrome, etc.). Other procedures are currently under evaluation and may soon enrich the therapeutic offer(9).

Surgical treatment of obesity in patients with liver echinococcosis consists of several stages: providing access, disinfection, echinococectomy, removal or leaving of the fibrous capsule, elimination of the residual cavity.

During surgery for liver echinococcosis, more than 20 operational approaches are used. When choosing access, it is important to consider:

- location of the parasitic cyst,
- the number and size of parasitic cysts [6,7].

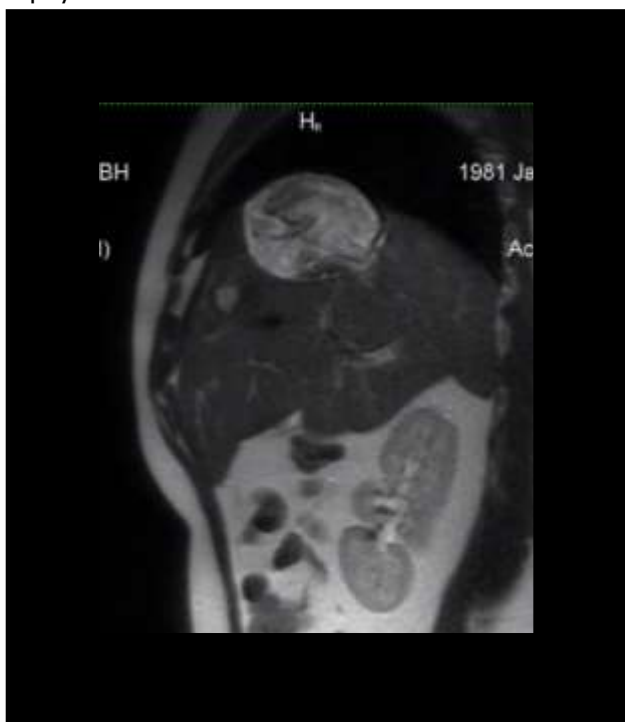
Analyzing the problem of liver echinococcosis and in patients with concomitant obesity, according to scientific studies of foreign scientists, we came to the conclusion.

1. Our data differs from European scientists as our doctors often face this problem. Therefore, the tactics of simultaneous operations: echinococectomy and drain resection have not been studied.
2. Awareness of doctors and surgeons is crucial for the tactics of surgical treatment of liver echinococcosis with obesity
3. Laparoscopic interventions for liver echinococcosis have been studied quite well, but some questions in simultaneous operations in patients with obesity remain open.

Clinical case:

Patient A.Yu. 42 years old applied to the private clinic Invivo in Tashkent. Diagnosis: Obesity 2 st BMI 42. Echinococcal cyst of the liver.

Echinococcal cyst of the liver was confirmed by ultrasound, when in the process of preparation for draining the resection of the stomach was discovered by accident. The patient, apart from complaints related to being overweight, was not bothered by anything. The woman was hospitalized for a thorough diagnosis and to decide further tactics together with surgeons and other related specialists. On physical examination: Vital signs: blood pressure 110/70 mmHg. Art., Pulse 90 beats per minute, temperature 36.5 °C, respiration rate 20 per minute, and O₂ saturation 97% at room temperature. There was no cyanosis or lymphadenopathy. In the lungs, vesicular breathing is heard on both sides. Percussion pulmonary sound is preserved. Cardiovascular and neurological examination without features. Laboratory studies showed a total white blood cell count of 8.3 cells/m³, neutrophils 72%, eosinophils 6%, hemoglobin 10.7 g, MCV 92, and platelets 250. ESR was 14 mm/hr. All standard blood chemistry tests, including kidney liver tests and enzymes were within normal limits. Bleeding and clotting time was normal, serum immunoglobulin E was 778 KU/L (normal = 0–114), HIV: negative, HBsAg: negative, and anti-HCV: negative. The electrocardiogram showed normal sinus rhythm. Ultrasound examination of the abdominal cavity showed a clearly defined anechoic cystic lesion (echinococcal cyst) in the IV-V segment of the liver with a diameter of 6-9 cm with internal echo signals(pic.1). The results of the MRI of the abdominal cavity conclusion: volumetric cystic formation of a parasitic nature. Ultrasound examination of the pelvic organs without features. There is no consensus on the tactics of surgical treatment of such patients with liver echinococcosis and obesity, and each case must be individualized. In obese patients, echinococcal cysts may increase in size due to a decrease in cellular immunity and humoral effects of adipose tissue. There is a risk of cyst rupture due to compression of the enlarging subcutaneous adipose tissue of the anterior abdominal wall, followed by catastrophic anaphylaxis.



During preoperative preparation for simultaneous surgery, the patient received a short-term 5-day use of albendazole at a dose of 10 mg/kg/day in divided doses as adjuvant therapy with hepatoprotectors.

Procedure: The patient underwent laparoscopic entry into the abdominal cavity. During the revision, a cyst of the right lobe of the liver of the 5-6th segment was found, the main part of the cyst is located outside the liver, partially shrouded in adhesions and immured with an omentum. The remaining areas of the abdominal cavity are unchanged. Laparoscopic echinococectomy was completed without any difficulties, followed by laparoscopic drain resection. The postoperative period went smoothly. The patient was discharged on the 3rd day after the operation. Re-examination after 1,3,6 months, the liver is unchanged, the residual cavity and relapses are not observed. BMI after 6 months 32. The patient's quality of life showed a positive shift in all parameters.

Summary:

1. For patients with liver echinococcosis and the presence of concomitant obesity indications for drain resection, we recommend performing simultaneous operations.
2. Simultaneous surgery for liver echinococcosis should be performed by an experienced surgical team, which should have experience in traditional and laparoscopic surgical treatment in the abdominal cavity.

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