

RISK AND COMPLICATIONS OF LIVER HYDATID CYST OF THE REMAINING CAVITY IN THE SURGERY CLINIC I TARGU MURES

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Abstract: *Hydatid cyst is caused by a cestode parasite class, called Taenia Echinococcus and its predominant localization is achieved in the liver (55-60%). It affects mainly young socio-professional active population in endemic areas and especially in rural areas.*

Surgery is central to the treatment of liver hydatid cyst. Surgical procedure chosen in the treatment of remaining cavity of liver hydatid cyst should be adapted to location, size and particularly its complications.

Key words: *liver hydatid cyst, endemic, residual cavity, complications, surgical.*

Introduction

Hepatic hydatid disease is due to location and development of *Taenia Echinococcus* embryo, in terms of morpho-pathologic this parasite has two variants: *Echinococcus granulosus* (which produces usual hidatidosis) and *Echinococcus multilobularis* (which produces alveolar multilobular hidatidosis).

It is an endemic disease in countries that grow sheep and goats, in Romania the incidence is 5 cases/100000 inhabitants.

It's transmitted digestively by contaminated food with eggs of *Taenia Echinococcus*, the most common location being the liver (55-60%). Predominantly it affects socio-professional active

population in rural areas, being a serious illness with possible complications, and only surgical treatment is efficient.

Material and Method

The purpose of this study is to reveal population at risk of liver hydatid infection (sex, area of origin, age intervals), the degree of liver injury (number of lesions, liver lobes affected), and the remaining cavity complications (intra and postoperative) and methods of solving them. These issues were highlighted in a study in the Surgical Clinic I Tg. Mures, over a period of 12 years (January 1998 - December 2009), in patients admitted and operated for hepatic hydatid cyst in this period.

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Results

In this study there were included 255 patients who received surgical treatment during the mentioned period of time. Female patients were more affected-133 (52,15 %), compared to males-122 (47.84%). Area of origin of patients was in most cases rural- 162 (63,52 %), whereas the possibilities of contamination in this area and development of this pathology is higher (professional contact with animals, consumption of food contaminated with eggs of *Taenia Echinococcus*).

Affected population is predominantly young, active socio-professional, under 30 years-55 cases and between 30-39 years-54 cases.

Table 1

Age range (years)	Number of cases
< 30	55
30-39	54
40-49	36
50-59	48
60-69	46
70-79	16
>80	0

It can be noticed the location of majority lesions in the right lobe hydatid liver -186 (72.94%) and less in the left lobe, 37 (14.50%), or disseminated in both lobes-32 (12.55%). This is understandable given the "flow rolling" of portal blood flow.

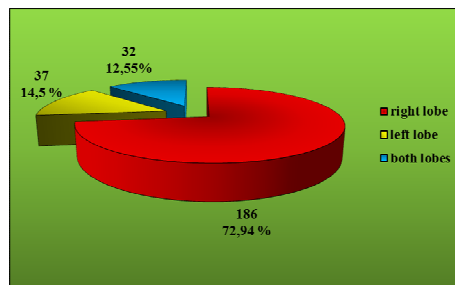


Fig. 1.

The majority lesions were single, 207 (81.17%) only 48 cases (18.82%) which were multiple.

Regarding complications of liver hydatid cyst of the remaining cavity, they can be grouped in intraoperative complications (highlighted after cyst evacuation) and postoperative complications (postoperative evolution has occurred in the remaining cavity).

Intraoperative complications occurred in 36 cases (14.11%) and were dominated by biliary and infectious complications.

Table 2

Intraoperative complications	Number of cases	Percentage
Biliary fistula	22	8,62 %
Broken in the bile ducts:	7	2,74 %
• with purulent angiololita	3	1,17 %
• jaundice	7	2,74 %
Broken in the peritoneal cavity	4	1,56 %
Abcedate	3	1,17 %

Thus biliary fistulas were majority-22 cases (8.62%), single or multiple lateral or terminal type, large or small diameter, have been solved by different methods: external drainage, suture, drainage CBP.

Cysts ruptured in bile ducts-7 cases (2.74%) were associated in all cases with icteric syndrome (passenger or persistent) and in 3 cases (1.17%) were complicated with purulent angiololita.

Cysts ruptured into the peritoneal cavity, a number of of 4 cases (1.56%) occurred apparently spontaneously, without a component postnecrotica (anamnestic) or infectious. Subsequently, they generated three cases of secondary echinococcosis.

Cyst abscess was revealed in 3 cases (1.17%). This is caused by biliary tract microbial pathogens. Purulent secretion

appearance is the result of parasite death and transformation into a pyogenic abscess. Infection with anaerobic bacteria is rare but very serious, then being able to complicate with the migration of pus in the bile ducts, clinic aspect of acute suppurated angiocolita is present in 3 cases (1.17%).

Postoperative complications of the remaining cavity, 33 cases (12.74%) were also dominated by biliary and infectious complications.

Table 3

Postoperative complications	Number of cases	Percentage
Bilerrhoea	14	5,49 %
Abscess of residual cavity	12	4,70 %
Epiplon necrosis (Seals residual cavity)	3	1,17 %
Residual intraperitoneal Echinococcosis	3	1,17 %
Pericolangita acute effusion	1	0,37 %

Postoperative bilerrhoeas were reported in 14 cases (5.49%) of which 4 required surgical reintervention, and 10 were solved by external drainage or ERCP.

Residual cavity abscess-12 cases (4.70%) required surgical reintervention (drain, lavage or hepatectomy).

There were found three cases (1.17%) of secondary intraperitoneal echinococcosis, consequence of hydatid cysts rupture in the peritoneal cavity.

A severe case (0.39%) occurred due to suppurated acute pericolangite (a serious complication of acute angiocolite effusion), a young patient who evolved to a liver failure. The patient later received a liver transplant, his condition became stable.

Postoperative recurrences were found in 11 cases (4.13%).

General complications were described and related to the evolution of liver hydatid

cyst residual cavity. Allergic manifestations were found both localized (5 cases) and generalized-4 cases (anaphylaxis).

I showed one postoperative death (0.39%) at 8 days postoperatively by pulmonary embolism, an elderly patient with cardiovascular pathology.

Discussion

According to data obtained from national and international literature specific for hepatic hydatid cyst, our data confirm that hepatic hydatid disease is affecting the socio-professional active young population, with specific professions.

Right liver lobe is predominantly affected due to laminar portal flow, single lesions being majority.

In percentage terms, the complications of hepatic residual hydatid cyst cavity (both intraoperative and postoperative ones) do not exceed 16% of all cases.

Postoperative recurrence is relatively low and mortality tends to zero.

Conclusions

1. Hepatic hydatid cyst develops long asymptomatic or nonspecific, thus making multiple diagnostic issues, tactics and surgical technique.
2. Hydatid cyst surgery is burdened by a series of complications, sometimes difficult to treat.
3. Early diagnosis is thus important because patients are affected predominantly young, active social and professional.
4. Modern concepts of surgical treatment of liver hydatid cyst is oriented towards understanding of hepatobiliary physiology, interventions aiming not only patient survival but also to solve possible hepato biliary sequelae.

5. Resolving complications of liver hydatid cyst of the residual cavity is mainly attribute of traditional surgery, but recently, an increasingly importance have more minimally invasive interventions (guided eco peritoneal puncture or CT) or noninvasive (ERCP in biliary complications).

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