Gallblader cyst

A choledochal cyst is a rare **congenital anomaly of the biliary tract**. It is often associated with an anatomical disorder at the junction of the bile and pancreatic ducts. The wall of the cyst is thickened to a width of 2-7 mm, it consists of fibrous tissue with elastic and muscle fibers. In most cases, dilatation begins just above the duodenum and ends at the junction of the left and right hepatic ducts (so-called type I, see below). The gallbladder does not show pathological changes, it can only be enlarged. Liver changes are only seen in older children with chronic disease (periportal fibrosis, rarely even cirrhosis). The main problem is the **risk of malignancy of the cyst** (formation of cholangiocarcinoma), which is 10-15% in untreated patients.

Classification

There are 5 basic types (classification according to Todani):

File:Zlucovody-01.png
Cyst classification

- type I – cystic dilatation of the external bile ducts (90-95% of all patients);
- type II – bile duct diverticulum;
- type III – cystic dilatation of the intraduodenal part of the choledochus (so-called choledochocele);
- type IV – multiple cysts of extra- and intrahepatic bile ducts;
- type V – cystic dilatation of the intrahepatic bile ducts (so-called Caroli's disease).

Clinical picture

Children younger than 1 year of age

- the first manifestation is **obstructive jaundice;**
- ascending cholangitis, liver fibrosis or cyst perforation develop relatively quickly.

Children older than 1 year of age

- the most common symptom is **abdominal pain;**
- there may be palpable resistance in the right hypochondrium;
- obstructive jaundice tends to be intermittent.

The so-called **typical trias** (abdominal pain, icterus and palpable resistance) is often mentioned in the literature. However, this only occurs in 10% of patients.

Diagnostics

File:Cysta choledochu ERCP.jpg
ERCP showing choledochal cyst

- **Abdominal ultrasound**
  - cyst size;
  - anatomical proportions of the proximal bile ducts;
  - vascular anatomy;
  - liver echogenicity;
- **ERCP**
  - cyst size;
  - accurately determine anatomical deviations of the pancreatobiliary junction;
  - proves the event. dilation of intrahepatic bile ducts;
- **MRCP**
  - the type of cyst can be determined very precisely;
  - if available, the method of choice;
- **intraoperative cholangiography** is currently only used for unclear intraoperative findings;
- an **MRI or CT examination** with the use of a contrast agent can be added - these methods are suitable for patients with concurrent pancreatitis or when malignancy of the cyst is suspected;
- biochemistry – **liver function tests** may be normal or pathological in the sense of obstructive jaundice and cholangitis, and **amylase** may be elevated in concurrent pancreatitis.

Therapy

For type I and IV, **radical excision of the cyst with cholecystectomy** and **replacement of the bile ducts** (hepaticojejunoanastomosis) is performed. Gallbladder cyst can be operated laparoscopically. In a classic operation, the procedure is as follows:

- It starts with an oblique right-sided incision in the right subcostal area (possible extension to the left);
- the liver is released from its suspensory apparatus and luxates through the surgical wound;
- the gallbladder and cystically dilated choledochus are released;
- the common bile duct is resected at the level of the bifurcation;
- the distal part of the bile duct is cut in the area of the head of the pancreas and sutured with an absorbable suture;

- if radical excision of the cyst is not possible, mucosectomy is performed (prevention of malignant reversal);
- retrocolic, 40 cm of jejunum is excluded and a wide jejunal anastomosis is made to bifurcate the bile ducts in the hepatic hilum.

In type II, **excision of the diverticulum** is performed .

In type III, the **choledochocele is resected** from a transduodenal approach.

For type V, a **liver lobectomy** is performed for unilateral involvement, in case of bilateral involvement, **liver transplantation** is the only treatment .

Early complications:

- anastomosis dehiscence,
- pancreatitis,
- bleeding
- ileus.

Late complications:

- stricture in the anastomosis,
- recurrent cholangitis,
- gallstones,
- pancreatitis,
- malignant twist.

Odkazy

Related articles

- Bile ducts
- Liver
- Cholelithiasis
- Operative procedures on the gallbladder and bile ducts
- Diagnostic imaging methods in the examination of the gallbladder and bile ducts
- Diseases of the gallbladder and pancreas in children

Used literature

- ŠNAJDAUF, Jiří – ŠKÁBA, Richard. *Dětská chirurgie.* 1. edition. Praha : Galén, 2005. ISBN 807262329X.