Acute cholecystitis

thumb|right|Cholecystitida (konkrementy)

Acute cholecystitis, e.i. acute inflammation of the gall bladder, belongs to the group of inflammatory NPB (AAE - Acute abdominal events?). It can occur as a primary inflammation, but more offten arises as an acute flare-up of chronic cholecystitis. Cholecystolithiasis is seen in patient history in 95% of cases. In that case a stone acts as a reservoir for the infection as well as an obstruction of the bile flow.

Pathological findings

In the course of the wall inflammation it comes to inflammatory exudation in the area below the liver - formation of effusion. Within hours surrounding organs (omentum, duodenum, transverse colon) stick to the wall of the gall bladder and **pericholecystic infiltrate** is formed. This way the inflammation becomes bounded. It can then either heal with the formation of adhesions, or proceed further even up to the gallbladder wall perforation forming pericholestatic abscess or GI fistula.

- Perforation into the free abdominal cavity → complicated diffuse biliary peritonitis or infradiaphragmatic abscess.
- Perforation into the liver → liver abscess.

Following the resorption of the inflammation the gall bladder stays full of colourless fluid, so-called *hydrops* is formed.

Risk factors

- Female gender, age above 40y.o.,
- genetic factors,
- multiple pregnancies,
- hormonal contraception,
- hormone substitution therapy,
- obesity, metabolic syndrome,
- rapid weight loss with development of cholecystolithiasis,
- hypercholesterolemia,
- severe burns and injuries,
- massive systematic infection,
- serious systemic disease,
- diabetes mellitus,
- tumor obstruction of the bile ducts.

The risk fators of acute cholecystitis can be summarized as **The 5-F rule**:

- fair: higher prevalence in caucasian population,
- fat: BMI >30,
- female: more frequently affects women,
- fertile: at least 1 or 2 children (pregnancies),
- forty: age ≥40.[1][2]

Clinical picture

- Pain in the right hypochondrium, the onset often resembles biliary colic, propagates under the scapula and towards the shoulder.
- Oscillating pains convert to a permanent one - worsens with movement, shivering and deep breathing.
- Fever, that rises with the progression of the inflammation; shivers.
- Nausea, vomiting.
- Shallow breathing.
- Tachycardia.
- Icterus in case of biliary passages obstruction.
- The patient looks for a restful position that spares the abdominal wall.

Diagnosis

Anamnesis

- cholelithiasis in anamnesis,
- pain onset after ingestion of certain foods, most frequently with high fat content.

Physical examination

- painful palpation,

- increased gall bladder size on palpation,
- Murphy sign,
- tachycardia,
- tachypnoe,
- fever,
- in case of more extensive inflammation défense musculaire,
- per rectum examination can be negative.

Auxilliary examinations

- Blood count: leucocytosis, elevated FW and CRP,
- Urinalysis: positive Ehrlich reaction, possibly bilirubin,
- RTG: can visualize contrast concrements in the gall bladder region,
  - in case of clostridial infection - gas in the gall bladder,
  - in case of biliodigestive fistula - gas in the biliary passages,
- USG – thickening of gall bladder wall, concrements,
- CT.

Complications

- Bile duct obstruction leading to Icterus,
- empyema,
- gangrene,
- perforation with possible progression to a generalized peritonitis,
- fistulas,
- gall bladder emphysema,
- small bowel obstruction with a massive concrement,
- biliary pancreatitis.

Differential diagnosis

- simple biliary colic,
- acute pancreatitis,
- laterocecal or subhepatic appendicitis,
- appendicitis in pregnancy,
- AMI,
- basal pneumonia,
- acute hepatitis,
- porphyria,
- gastric ulcer perforation.

Therapy

- In the majority of cases **conservative** therapy is sufficient - rest, cold compresses, only liquids per os, close follow-up of the patient's condition, spasmolytics, parenteral feeding, ATB (questionable - can obscure the signs of the inflammation spread to the surrounding tissues).
- In case of progression or complications surgical treatment is indicated.
- **Surgical therapy:** we differentiate 4 types of indications – urgent, acute, suspended and planned cholecystectomy.

Links

Related articles

- Chronic cholecystitis
- Infectious cholangitis

External links

- Akutní cholecystitida – video na youtube.com (https://www.youtube.com/watch?v=5d9uR1e9VMQ)

Source

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Literature

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1.
2.