

CHOLECYSTOCUTANEOUS FISTULA. CLINICAL, THERAPEUTIC AND EVOLUTIONARY PARTICULARITIES

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Abstract: Cholecystocutaneous fistula is an exceptionally rare complication today, which may be the result of an acute cholecystitis neglected for a long time. It is preceded by the formation of a phlegmon of the abdominal wall in the gallbladder projection area, followed by the establishment of continuity cutaneous solution. The author presents the case of a man, aged 77 years old with essential hypertension grade II and type II diabetes treated with oral agents, Parkinson's disease, ischemic heart disease, mitral valve insufficiency, chronic drug converted atrial flutter, who came to the Emergency Department with symptoms of a tumour formation in the right hypocondrium, associating celsian tegument signs. Surgical intervention is performed on day 7, the preoperative diagnosis being of cholecystocutaneous fistula. The work expresses the opinion of the author and aims at presenting the strategy, the clinical and evolutive particularities in the case of cholecystocutaneous fistula.

Cuvinte cheie:
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Rezumat: Fistula colecisto-tegumentară este o complicație excepțional de rară astăzi, putând fi rezultatul unei colecistite acute neglijate, îndelung evaluate. Este precedată de formarea unui flegmon al peretelui abdominal în aria de proiecție a colecistului, urmată de constituirea soluției de continuitate tegumentare. Autorul prezintă cazul unui bărbat în vârstă de 77 de ani cunoscut cu hipertensiune arterială esențială de gradul II, diabet zaharat tip II tratat cu antidiabetice orale, boala Parkinson, cardiopatie ischemică cronică, insuficiență mitrală, flutter atrial convertit medicamentos, se prezintă în serviciul de urgență cu simptomatologia unei formațiuni tumorale în hipocondrul drept, asociindu-se semnele celsiene tegumentare. Se intervine chirurgical la 7 zile, diagnosticul postoperator fiind de fistulă colecisto-tegumentară. Lucrarea exprimă opinia autorilor și își propune prezentarea strategiei terapeutice, particularitățile clinice și evolutive în cazul fistulelor colecisto-tegumentare.

INTRODUCTION

Cholecystocutaneous fistula is an exceptionally rare complication today, which may be the result of an acute cholecystitis neglected for a long time. It is preceded by the formation of a phlegmon of the abdominal wall in the gallbladder projection area, followed by the establishment of continuity cutaneous solution.

First of all, we should differentiate the internal fistulae from the external ones. The first are usually the result of a pathological process of the evolution of the biliary tract or of the neighbouring viscera and the last, besides the evolution of the pathological process of the biliary tract, there is also the result of surgical therapeutic mistakes.(1)

Fistulous ducts can develop in 2 very different pathological conditions: they appear at the end of a long, morbid development or, conversely, are the result of a trauma or an intervention the biliary tract after external drainage of the common bile duct (when there is still a barrier to primary biliary unnoticed during operation), or by faulty techniques in performing a cholecystectomy, or, much more rarely they appear at the end of a long morbid developments of acute cholecystitis. Due to the effectiveness of modern postoperative care today, the cases in which long term external fistulas are a wilful act, i.e. the first surgical time of a serial intervention in a patient with very impaired general condition are very rare.

Medical biliary fistulas are consecutive to the evolution of the net shapes or of those torpid by the evolution of

angio-suppurative cholecystitis or cholecystitis. While fistula is formed, there is no significant symptom or only a deep pain in cystic region, and sometimes pulping, or even a vaulting at this level. Cutaneous fistulas represent about half of the cases.(2)

Cholecystocutaneous fistula comes from the biliary vesicle in almost every case. After fistula opening, the bile is purulent or there is puss mixed with biliary sand or calculi. In the following days the bile becomes purer and can sometimes collect up to one litre per day. From time to time, in the early days, it can bring gallstones. Sometimes, if the cystic duct is obstructed, only puss mixed with gallstones comes out, without any bile. When you explore the line of fistulous, it seems often irregular, narrow, crooked, especially if intraperitoneal modifications are present and this is the cause for which it sometimes clogs. In that moment, phlegmon bile signs reappear. In some cases, the fistula heals spontaneously, after calculi release. A small fistula persists for months, then end up by closing. This is a natural colecistostomy. Most commonly, the gallstones will not get eliminated unless with great difficulty, suppuration extended and the patients get weak.

After fistula formation, regardless of the clinical form, there follows a period of attenuation of both the local signs and the general signs.

Further development is rarely favourable regarding the spontaneous healing purposes since, after a transient improvement, the patient's condition may worsen again.

There also are exceptional fistulas that deserve special

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CLINICAL ASPECTS

attention: they can form in the mediastinum, pericardium, portal vein, retroperitoneal cellular tissue and even urinary tract. There have been reported the presence of gallstones in the bladder. Biliary-chest fistulas are revealed by a violent chest pain, followed by biliar purulent vomica and it usually involves death in a short time. In these cases, gallstones are never eliminated through vomiting, but they can also be found in the pleural cavity. (Petridis).(2)

As fistula is total or partial, the patient will present only a slight weight loss or deep deterioration of the general condition, with serious intestinal disorders, hemorrhages, and deficits glandular type. Biliary tract infection (angiocolitis icterine) will be added sooner or later.

Remember the experimental researches of Prof. Teohari that showed that while young dogs resist relatively fine for long time, in case of fistulous, which derives from the outside almost every ball, the old animal die shortly. This is very important for surgeons, showing the elimination of external drainage methods in the elderly patients.

A calculus in the ampulla of the gall bladder can be enclaved and evolve at a same time with a lithiasic cholecystitis. The process usually starts with the formation of gallstones in the gallbladder, but there have been cases in which stones were not present. It is likely that the cholecystocutaneous fistula to have at home a calculus that obstructed the cystic duct, causing acute cholecystitis, empyema and the formation of adhesions between the gallbladder and the skin. Perforation occurs through the skin on the outside and stones may cross the fistula. The size of the calculus is important because the stones with a diameter of less than 2 to 3 cm can usually pass.(6,7)

CASE PRESENTATION

A patient, 77-year-old, showed up at the Emergency Unit within the Clinical County Emergency Hospital of Sibiu County for the following complaints: the presence of a tumour formation in hipocondrium, diffuse abdominal pain, sclero-skin jaundice, nausea, fever, chills, hyperchormic urine, asthenia, fatigue, skin with celsian signs in the right hypocondrium, symptoms that started about a month after the appearance of right upper quadrant pain, nausea, bilious vomiting, symptoms that have decreased in intensity, in association with the occurrence of a tumour in the right upper quadrant, associated with celsian skin signs, prolonged febrile syndrome, icteric syndrome. The objective examination revealed enlarged abdomen in volume, with a tumour formation, elipsoid in hypocondrium, with a size of about 20\15 cm, hard, matte, sensitive to palpation, with skin celsian signs (figure no. 1).

Figure no. 1. Highlighting the tumour formation in the right upper quadrant, with celsian skin signs



Laboratory samples revealed: a low level of urea (16mg/dL, v.n. 18-55), an increased level of Fibrinogen (467, 1 mg/dL, v.n. 180-400), direct bilirubin (5,23g/dL, v.n. 0-0.3), total bilirubin (7,85 mg/dL, v.n. 0,2-1,2), hiponatriemy (129,5 mEq / l, vn135-148), hiperglicemy (200mg/dl, VN 82-115).

CT examination showed a horizontalized gallbladder, subhepatically located, with tick wall, covered in muscle of the

right flank, they exceed, with fluid collection, with its own wall at the level of the right external transversabdominal muscle, which appears high in volume (figure no. 2). The impastation of the adjacent subcutaneous tissue. Renal parapielic cists bilaterally. Sigmoid diverticula.

Figure no. 2. CT appearance – thick-walled gallbladder evolving into the abdominal wall fluid collection and with its own wall at this level



Figure no. 3. Intraoperative aspect of fistula



At the second day of hospitalization, cholecystocutaneous fistula occurs, following a period of attenuation of both local signs and the general signs, and 7 days after admission, the surgical intervention is performed by exploratory laparotomy consisted of Kocher subcostal incision that revealed the cholecystocutaneous fistula, gangrenous acute cholecystitis, fistulised to the wall, parietal abscess, subhepatic block for which viscerolysis was practiced, as well as cholecystectomy (cystic duct of approximately 0.6 cm) MBD exploration (tough, fibrous liver infiltrated hilum), parietal abscess escape (the remaining cavity about 15\10 cm) resection, walls, drainage abscess transcistic, massive lavaje, double subhepatic drainage, drainage of the parietal, the drainage cavity of the Douglas space.

The postoperative evolution of the patient was favourable, with the disappearance of sclero-skin jaundice, the patient is hemo-dynamically and cardio-respiratory balanced, with the resumption of bowel habits, normal stool and urine normal, with drainage on the transcystic drainage tube of about 450ml in the first 6 days postoperatively, since the 7th day after operation, the patient presents biliary drainage on the subhepatic drainage tube (300 ml), and on the transcystic drainage subhepatic tubes (150 ml) and transcystic tubes of approximately 400 ml and 50 ml with drainage of the postabscess remaining cavity with dirty liquid in small quantity,

CLINICAL ASPECTS

with the suppression of the drainage tube from this cavity on the 6th day after the surgery, with the postoperative wound with a minimum skin dehiscence in 1/3 with minimum dirty secretion and its discharge and favourable local development.

9 days after the surgery, check-up colangiography on the transcystic drainage tube is performed, which shows an a declived calculus inclaved in the common bile duct (figure no. 4), reason for which the III Meedical Section of Cluj Napoca was announced and agreed with the patient's hospitalization in order to complete the imagining and interventional examination in that medical ward.

Figure no. 4. Cholangiography-calculus inclavated in the common bile duct



The patient is admitted in the III Medical Section of Cluj Napoca, where he carried out blood counts, ultrasound that emphasizes a liver with hepatic steatosis, dilated CBP and CBIH. ERCP is decided and practised highlighting a great and rough inclavated calculus in CBP, which is difficult to be fractioned and extracted. For safety, a plastic prosthesis is assembled. Post ERCP, the patient experienced acute pancreasitis with severe malaise, abdominal pain, of high intensity with increased amylase (in dynamics: 1499-3701-1859-1598-368Ui), nausea, vomiting, symptoms in remission at the time of discharge slowly. The patient is recalled three months later to remove the prosthesis.

He returns to the surgery ward of Sibiu, 20.12.2013 and gets admitted with the diagnosis of acute pancreatitis after ERCP.

The patient is discharged on 24.12.2013 presenting a favourable evolution being balanced in terms of cardio-respiratory and hemodynamics, absent drainage on the transcystic drainage with the suppression of the 2nd day of hospitalization, absent on subhepatic drainage tubes, with their suppression of the 4th day of hospitalization, with postoperative wound with minimal dirty secretion in the middle third under healing.

The patient returns for check-up one month later, the patient is healed from the surgical point of view and the wound is also healed.

DISCUSSIONS

Cholecystocutaneous fistulas have been described in the literature as having appeared as a result of iatrogenic complications arising during surgical interventions on biliary drainage after an external drainage of the common bile duct (when there persists a main obstacle, unnoticed during operation) or, much more rarely, following a lengthy development of lithiasis or acute cholecystitis. Due to the effectiveness of modern preoperative techniques, today, there are becoming more and more rarer the cases where long-term foreign fistulas represent a wilful deed, for example the first surgical time of a serial intervention in a sick patient with very altered general condition. Leaving aside the small fistulas which upset the patient in terms of aesthetic appearance, skin irritancy

and the required dressings, any external fistula is accompanied by disorders whose gravity is proportional to the amount of the lost bile. Digestive disorders are partly similar to those described in the biliary obstruction are due to the fact that the bile reached the duodenum only in a small quantity. The action of yeasts suffers in these cases not only for the reasons set out above, but also because of the loss of pancreatic juices which squeezed through the ducts. That is why any external biliary fistula with high flow occurred in the evolution of an acute cholecystitis or otherwise, should be solved as soon as possible, in order to prevent the patient's body's resources to deplete.

There were conflicting views on the treatment of cholecystocutaneous fistulas, particularly on the optimal timing for surgery. The parameters discussed upon are the early surgery intervention defined as up to 72 hours of symptoms onset, intermediate surgery is performed between 72 hours of onset and disappearance of clinical manifestations, delayed surgery which allows decreasing the inflammatory process, and the elective intervention, which is scheduled, performed after an interval of 6 weeks to 3 months. Most surgeons agree on the interim operation, i.e., between 72 hours from onset and the disappearance of clinical manifestations, in order not to spoil the biological reserves. In most cases, cholecystectomy can be performed with or without external biliary drainage, abscess skin abscess cavity abolishment.(3)

CONCLUSIONS

1. It is necessary to pay special attention to the preoperative preparation and feeding of these patients, whose protein reserves are depleted.
2. The urgent need to resolve as soon as possible these fistulas, especially those that deprive the body of a large quantity of bile.
3. The need for surgery of cholecystocutaneous fistulas should be made between 72 hours of onset and the disappearance of clinical manifestations, i.e. the intermediate surgical intervention.
4. The complex, multidisciplinary treatment of the cholecystocutaneous fistulas and their complications.
5. Surgery is the treatment of choice of cholecystocutaneous fistulas.
6. It is important to follow-up the patients over a period of at least 6 months after healing.
7. In reference to the methods of the main drainage, loss of bile hangs tough in the confluence of the discussion over tactics in favour of biliodigestive anastomosis.

REFERENCES

1. Ţurai I, Gerota D. Chirurgia căilor biliare extrahepatice, Ed. Medicală, Bucureşti; 1957.
2. Pavel I. Colecistopatiile, Ed. Medicală, Bucureşti; 1961.
3. Schwartz. Pricipiile chirurgiei, vol. II, Seventh edition, Ed. Teora; 2005.
4. Prişcu A. Chirurgie vol 2, Ed. Didactică şi pedagogică, Bucureşti; 1994, ISBN 973-30-2915-7.
5. Rigler LG, Borman CN, Noble Ioana JF. Gallstone, Obstruction: pathogenesis and roentgen manifestations. JAMA 1994;117:1753-1759.
6. Angelescu N. Ocluziile intestinale. În Tratat de Patologie Chirurgicală, Ed. Medicală (Bucuresti); 2001. p. 2168-2184.
7. Ellis H. Special Forms of Intestinal Obstruction. În Maingot's Abdominal Operation, Ed. Appleton & Lange; 1990.