



LAPAROSCOPIC CHOLECYSTECTOMY ASSOCIATED WITH TREATMENT OF HERNIA AND INCISIONAL HERNIA

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Summary. *The association of cholelithiasis with hernia or incisional hernia poses a problem for the surgeon in evaluating whether laparoscopic cholecystectomy, a classic cholecystectomy followed by hernia or incisional hernia operation or a simultaneous operation is the preferred approach for this particular condition. The best choice is especially difficult, by the paucity of data on laparoscopic techniques in this situation. In our clinic in the period 1.01.1994 - 15.01.1996 we performed 296 laparoscopic cholecystectomies (L.C.) and we found at 5 cases the association of cholelithiasis with hernia: -1 case with giant infraumbilical incisional hernia; - 3 umbilical hernias , - 1 epigastric supraumbilical hernia. The 5 patients were females, age between 31 - 68. We choose the solution of simultaneous operation: L.C. and operation for hernia. Under general anesthesia we performed an incision at the level of the hernia, we isolated the peritoneal sack. Through a direct cutdown onto the peritoneum we controlled the presence of adherence and we prevented a visceral injury and as in an open laparoscopy we inserted laparoscopic port. A purse string suture is placed around the fascia and peritoneum in order to prevent excessive CO₂ leak. We inserted the laparoscope and the other 3 additional ports. In the case of under-umbilical hernia we reduced the peritoneal sack with separate suture In the cases of umbilical hernia we introduced the first port through the umbilical sack. At the epigastric hernia we introduced the first port through the epigastric hernia and the 2-nd port infraumbilical. We performed normally the laparoscopic cholecystectomy and we finished by repairing the abdominal wall, closing the fascia defect. In incisional hernia we performed a parietal aloplasty with net. The postsurgery evolution was good in all the cases.*

Key words: *Laparoscopy, cholecystectomy, hernia*

Introduction

From the first experimental laparoscopic cholecystectomy that took place in 1985 (Filipi, Male, Rosenna), this intervention proved its remarkable advantages and minimal risks, contributing in spreading of this method world-wide in only few years (1). Continuous perfecting of instruments as well as achievement in experience and increase of surgeons courage permitted to obtain remarkable performances in the field of laparoscopic surgery of the bile ducts without exposing the patient to any risk. Indications and contraindications of laparoscopic cholecystectomy are relatively evident, but the growing experience of the surgeons led to the diminishing of the relative and even absolute contraindications of this procedure.

Material and Methods

In the First Surgical Clinic of U.M.F. Timișoara, the laparoscopic cholecystectomy (LC) is a commonly used method, which proved its very good results. From a total of 296 laparoscopic interventions there was only one case of reintervention, and the mortality was null. In this article we analyze a different situation - the association of gallstone with the presence of hernia or incisional hernia. In this situation the surgeon can take the case in more variants:

- the classical intervention for gallstone and for hernia/incision hernia made through distinct incisions practiced concomitantly or successively.
- laparoscopic intervention for the gallstone and classical for hernia/incisional hernia practiced concomitantly
- laparoscopic intervention for both gallstone and hernia/incisional hernia.

From the personal experience of 100 cases of laparoscopic cholecystectomy, in five cases it was found an association between gallstone and:

- giant subumbilical and unreducible incisional hernia: 1 case
- umbilical hernia: 3 cases
- epigastric hernia: 1 case

We shall present now the following five cases from the personal experience.

Case 1

Female patient B.S., 50 years old, hospitalised on January the 5th, 1996, with the Observation File no. 25/1996 with the diagnosis of chronic gallstone cholecystitis, bulky subumbilical and unreducible incisional hernia, total hysterectomy with bilateral adnexectomy on median incision (1993) and caesarean section on Pfannenstiel incision (1974). Obesity. The patient has retired because of disease since 1993. The present affection has begun in 1994 with the appearance of a pseudo-tumoral formation in the median third of the postsurgery umbilical-pubian scar. In the last six month the patient accuses transit troubles (constipation with excrement once at 3 days), dysuria and nocturia. The extension of this formation was followed by pain, initially intermittent and from a week ago by continuous pain. At the clinical examination- she represented with a median postsurgery umbilical-pubian scar and a scar by Pfannenstiel incision. In the median third of the umbilical-pubian scar, on the two sides of the median line it was found a 10 cm diameter formation, partial reductible, painful spontaneously and at touching, and sound at percussion with hydroaired noise when attempting of reduction was in question. At palpation of the abdomen hypogastric pain was found. Echography found a gallbladder with a 10 mm hyperechogenic image with one posterior shadow; principal bile duct 3.7 mm, portal vein 10 mm. The association between bulky incisional hernia with gallstone put in question the concomitant solving of the two lesions.

Classical approach of the gallstone needed proximal extension of the subumbilical incision or concomitant approach through two different incisions: one of them subumbilical and the other under rib. To avoid the risk of one long median incision and the double incision it was chosen the solving of the gallstone through LC using incisional hernia as point of introduction of the first tube.

The intervention was made on January 6, 1996, surgery protocol 20/1996 /First Surgical Clinic. An elliptic incision was made at the level of the incisional hernia zone with extirpation of the umbilical-pubian scar. The sack of incisional hernia was found and opened. The great epyplon and an intestinal anse from a diverticule of the sack are reduced, penetrating the peritoneal cavity. Further extension of the sack incision gets to the reduction of the intestinal anses from incisional hernia. Under digital control it is folded with five sutures through the incisional hernia sack and then a tube is

introduced in the peritoneal cavity and fixed at aponevrosis with a circular suture around it. Then inspiring inside cavity with CO₂ gets to pneumoperitoneum and then the intervention continues by introducing other three tubes. It is made a backward LC without difficulties and without incidents; a drain tube is placed subhepatically. At the end of LC the tubes are withdrawn and then treatment of incisional hernia was continued by complete isolation of the sack, partial resection of the incisional hernia sack and introduction of a polyethylene net for parietal substitution, because the big parietal defect did not permit closing of the muscular-aponevrotic wall. The net was introduced in the supraperitoneal portion, overtaking the edges of the defect and fixing it with six sutures at a distance from the parietal defect. Postoperative recovery was good with resuming of the intestinal transit after 48 hours. The subumbilical operative wound, respectively those wounds for LC have had a favourable evolution with suppressing the sutures after 7 days. The patient went out of hospital the 9th postoperative day.

Case 2

Female patient, N.V., 30 years old, hospitalised in august the 30-th 1995 with observation file no. 19509 because of colicky pain in the right hypochondrium with interscapulo-vertebral irradiation, billiary vomiting. At the clinical exam - an umbilical hernia with the diameter of 2 cm was found. Echographically the presence of 2 hyperechogenic images with a diameter of 1 cm and a posterior shadow were found in the gallbladder. On august 30-th 1995 it was made an operation (no. 1997) and accomplished LC associated with concomitant solving of the umbilical hernia. Under general anaesthesia, through a longitudinal incision, vertical of 1 cm, extended paraumbilical left and supraumbilical, the sack of umbilical hernia is isolated and the tube is introduced in the peritoneum through the parietal defect of hernia. With the help of one thread the tube is tightened at the wall and the pneumoperitoneum is induced. Afterwards the LC goes on as usual. At the end of the intervention, the canule is retracted from the peritoneum and a Mayo suture is accomplished from repaising the wall. The postoperative evolution is favourable and the patient gets out of hospital the 7th postoperative day with the healed wound.

Case 3

Female patient, P.E., 44 years old, hospitalised on May 15th 1995 with observation file 26015 and diagnosis of chronic lithiasic cholecystitis, unreducible umbilical hernia, obesity. At the echosonographic examination a medio-corporal folded gallbladder with multiple hyperechogenic images with posterior shadow cone, diameter till 15mm, was found. At the clinical exam, an umbilical hernia with diameter of 9 cm, unreducible, painful spontaneously and at compression was found. The surgical intervention no. 1996 from November 17, 1995 consisted in LC and treatment of the umbilical hernia. In general anaesthesia it was accomplished an

elliptic incision with omphalectomy, then the tissues incision on layers till the level of the umbilical ring, isolating the hernia sack.

The sack is sectioned, adherences of the herniated epyplon are cut, and partial resection of the epyplon. At the umbilical level a burse is created in which a canule and a video camera are introduced. A pneumoperitoneum is made, then the other tubes are introduced at a conventional level and it is put in practise an anterograde LC without incidents. Then it is introduced a subhepatic drain tube, afterwards solved with Mayo technique. The postoperative evolution was good and the patient went out of hospital the 9th postoperative day with the healed wound.

Case 4

Female patient C.I.: 50 years old, is hospitalised with the observation file no. 17220/29.XI.1995 with the diagnosis of chronic lithiasic cholecystitis, and epigastric hernia. At the clinical examination an epigastric hernia with the diameter of 2cm was found. At the echosonographic exam a plurifolded lithiasic gallbladder was found. The intervention took place on December 5, 1995 (no. 2091). Under general anaesthesia the pneumoperitoneum is accomplished through the subumbilical point and it is compressed by reducing the epigastric hernia. The second tube is introduced after dissection at the level of the epigastric hernia and the other two tubes in conventional point. The LC is accomplished without incidents. The canules are retracted, then follows the suture of the wall at the level of epigastric hernia. Postoperative evolution is favourable.

Case 5

Female patient C.F.; 36 years old, was hospitalised on September 27, 1995, with the observation file no. 2191. Diagnosis of chronic lithiasic cholecystitis, cholesterolosis with polyps was made. LC is accomplished by introducing the Veres needle and the first tube at the level of the umbilical scar. After that the intervention goes on as usually without incidents. At the end of the intervention, after retracting the canule, the umbilical incision is extended, the hernia sack is prepared, got out and the parietal defect is closed with three sutures. Postoperative evolution is favourable and the patient goes out of hospital on the 7th day with healed wounds.

References

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Discussion

The big obesity, previous surgery in abdomen, and the presence of intraperitoneal adhesions represent relative and absolute, contraindications of LC. In obese people, LC is difficult because of the thickness of the abdominal wall that opposes resistance in manipulating the instruments. Presence of an incisional hernia with a big parietal defect or of a hernia, especially unreducible may present a difficulty in accomplishing the LC, respectively introducing the tubes in the abdomen. An association between obesity and gallstone and incisional hernia/hernia may be a real problem for the surgeon from the point in solving the chosen intervention. On the basis of experience we preferred the LC variant associated with surgical treatment of incisional hernia or hernia. The excellent postoperative results prove the advantages of LC procedure associated with solving the hernia:

- concomitant solving of the two lesions
- decrease of the operative aggression on the abdominal wall
- decrease of the risk of the incisional hernia and relapse of hernia
- decrease of hospitalisation period
- decrease of postoperative immobilisation period
- socio-professional reinsertion of the patient

Conclusions

In the situation of a gallstone associated with incisional hernia/hernia it is possible concomitant intervention with incisional hernia. On the basis of the experience of 5 cases represented by one subumbilical incisional hernia, 3 umbilical hernia, and one epigastric hernia associated with gallstone we consider that the chosen solving of the intervention and favourable postoperative evolution plead for the technical variant used by us. LC was accomplished by introducing a tube in peritoneum at the level of the parietal defect, afterwards the intervention of LC went on by the usual technique, and at the end of the intervention we accomplished the treatment of hernia/incisional hernia, including the plasty of the abdominal wall with a polyethylenic net.

LAPAROSKOPSKA HOLECISTEKTOMIJA PRAĆENA OPERACIJOM HERNIJE I INICIZIJALNE HERNIJE

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Kratak sadržaj: Udružena holelitijaza sa hernijom ili inicizijalnom hernijom predstavlja hirurgu problem u proceni da li je laparoskopna holecistektomija sa klasičnom hernijom praćena operacijom hernije ili inicizijalnom hernijom poželjan pristup za pojedine slučajeve. Najbolji izbor je naročito otežan malobrojnim podacima o laparoskopnim tehnikama u ovakvoj situaciji. Na našoj klinici u periodu od 1.09.1994. do 15.1.1996. izvršili smo 296 laparoskopnih holecistektomija i otkrili u pet slučajeva udruženu holelitijazu, tri umbilikalne, jednu epigastričnu nadpupčanu herniju i jedan slučaj sa infraumbilikalnom inicizijalnom hernijom.

Svih pet pacijenata bilo je ženskog pola. Odlučili smo se za simultanu operaciju holelitijaze i operaciju hernije. Hirurški rez je urađen u nivou hernije, izvađena je peritonealna kesa. Operacioni tok bio je sledeći. Kroz direktan rez na peritoneumu kontrolisali smo prisustvo prijanjanja i sprečili visceralnu povredu i kao na otvorenoj laparoskopiji ubacili smo laparoskopnu cev. Na fascijama i peritoneumu uradili smo šav da bi se sprečio preterani gubitak CO₂. Ubacili smo laparoskop i ostale tri cevi. U slučaju pupčane hernije, smanjili smo peritonealnu kesu odvojenim šavom. Kod epigastrične hernije ubacili smo jednu cev kroz epigastričnu herniju a drugu infraumbikalno. Normalno smo izveli laparoskopnu holecistektomiju i hiruršku intervenciju završili zašivanjem abdominalnog zida sanirajući fascijalni defekt. U prvoj inicijalnoj herniji izvršili smo parijentalnu aloplastiju sa mrežom. Postoperativni tok je bio uspešan u svim slučajevima.

Ključne reči: Laparoskopija, holecistektomija, hernija

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