LAPAROSCOPIC MANAGEMENT OF APPENDICULAR ABSCESS
(CLINICAL OBSERVATION)

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This article presents the diagnostics and laparoscopic management of appendicular abscess of 66 y.o. 
woman operated 3 weeks after the disease onset. The patient underwent surgery successfully. Purulent 
septic post-operative complications were not demonstrated. That confirms the benefits of minimally 
invasive surgery.

Key words: appendicular abscess, laparoscopic appendectomy

Laparoscopic appendectomy is becoming the preferred technique for treating acute appendicitis during the last decades. Minimization of post-operative trauma contributes to the decreasing of terms of staying in the hospital and improving of up-to-date and delayed results. Literature data testify the laparoscopic management of destructive appendicitis and appendicular abscess to decrease the rate of post-operative complications (1, 2).

CASE REPORT

A 66-year-old patient B. was hospitalized in the surgical department of Kyiv City Clinical Hospital on February 18, 2013. She complained of fever (38.5°C), frequent painful urination, severe colicky pain in the right iliac fossa and in the right lateral abdomen radiating to the spine, nausea and weakness.

She considered herself to be ill during 2 last weeks, since she first noticed abdominal pains accompanied by dyspepsia and dysuria. During the mentioned period the patient was taking NSAIDs and fluoroquinolone antibiotics orally as a self-treatment. Her case history included laparoscopic cholecystectomy (2001), chronic pancreatitis, diabetes mellitus of II type, chronic heart disease, hypertension of II type, atherosclerotic coronary cardiosclerosis, and supraventricular premature contraction.

An objective examination revealed the patient’s general condition of moderate severity. The abdominal was tense. There was sharp pain in the right iliac fossa where infiltration of 8×8 cm with limited mobility was palpated.

An ultrasound confirmed the appendicular abscess.

The operative intervention was performed. Having used the three-trocar technique – the umbilical port (10 mm), right and left iliac region ports (5 mm) – the diagnostic laparoscopy was performed. In the pelvic cavity about 200 ml of cloudy exudate was found out. In the right iliac fossa friable infiltration involving cecum, ilium, omentum and abdominal wall was visualized. In the right abdominal area there were post cholecystectomy adhesions which were dissected and abdominal exudate was aspirated. On examination of the infiltration the abscess cavity up to 120 ml in volume was opened. The pus was aspirated, taken for the culture and antibiotic sensitivity test. The appendix located retrocaecally and retroperitoneally was removed from the retroperitoneal fat from the base till the apex with the mesenteric vessels gradual coagulation. The macroscopic examination revealed the appendix to be up to 10 cm in length and 1.5-2 cm in thickness, grey in color, its mesentery was infiltrated with thrombosed vessels. The appendectomy with the ligation of the appendix base was performed. The drains were inserted into the retroperitoneal fat, pelvic cavity and cavity of the abscess. The post-operative diagnosis: acute gangrenous appendicitis, appendicular abscess. The operation: laparoscopic appendectomy, appendicular abscess evacuation and draining.

The histologic examination data confirmed the gangrenous changes of the appendix. The bacteriologic examination revealed Klebsiella pneumonia with sensitivity to fluroquinolone antibiotics and cephalosporins.

The post-operative treatment included infusion therapy, antibacterial therapy, physiotherapy (high-frequency therapy on the infiltration area, inhalation of broncholytic compound, breathing exercises), and symptomatic treatment.

RESULTS

There were no post-operative complications. Enteral nutrition was administered on the second day, an active regimen was recommended since the first post-operative day. The drains were removed: the drain from the retroperitoneal fat was removed on the third post-operative day, from the pelvic cavity – on the fourth day, and from the abscess area – on the seventh one. Dysuria was arrested on the third day. Stitches were removed on the eighth day and the patient feeling satisfactory was discharged home for district surgeon’s follow-up. A month later scheduled examination was performed – the patient felt good.

DISCUSSION

First laparoscopic management of acute appendicitis was induced by Semm в 1982 (3). He used the endoscopic method which that time was being intensively developed and was used by gynecologists for vessel occlusions during pelvic operations; Semm also worked out the indications for endoscopic appendectomy (3).

The advantage of laparoscopic operation over the traditional appendectomy which was first introduced by Mc Burney (4) a century ago is presented first-of-all in minor surgical trauma which decreases the postsurgical pains and necessity of narcotic analgesics, reduces the hospital stay period and risk of post-operative infectious complications, and is accompanied by good cosmetic result (5, 6, 7). Some authors, however, denote longer period of operation itself especially when performed by non-experienced surgeons, higher cost of operation, and higher risk of intra-abdominal abscess formation resulting from mechanical dissemination of bacteria due to insufflation of carbon dioxide into the abdominal cavity (8, 9).

Treatment of uncomplicated acute appendicitis by laparoscopic method is promoted by Towfigh, Katkhouda, Guller, and Chung (1, 6, 7, 10), though laparoscopic treatment of appendicular abscess as a complication of acute appendicitis is disapproved by Sun Gu Lim (11). Kouwenhoven, Guller, and Towfigh consider laparoscopic method to be safe and effective in patients with appendicular perforation, peritonitis and appendicular abscess (5, 6, 7). It is confirmed by comparative research made by Guller, which demonstrated the lower level of complications in 32406 patients operated by laparoscopic method (6).

Contrary to Sun Gu Lim’s data (11), we haven’t observed intra-abdominal abscess and postoperative postoperative ileus.
Laparoscopic management of appendicular abscess (clinical observation)

Appendicular abscess being a complication of appendicitis may have different localization. It may be located either in its typical place or in any other one, even in subhepatic area (12).

Our clinical observation confirms the appendicular abscess to be difficult in diagnostics and to have atypical clinical course – our patient had a clinical course masked by dysuria. In the appendicular abscess diagnostics the ultrasound helps to visualize the liquid focus and destructive changes of appendix which approve the abscess formation.

CONCLUSIONS

Laparoscopic sanitation of abdominal organs, in our case – appendicular abscess against the background of gangrenous appendicitis is an effective and safe method of treatment; it should be considered individually for every patient with complicated appendicitis. It contributes to significant reducing of the treatment duration, avoiding purulent septic complications of internal abdominal organs and anterior abdominal wall; it is accompanied by fast rehabilitation period and positive effect on quality of patient’s life.

REFERENCES


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