

# Granulomatous chemical peritonitis on the ileocecum after laparoscopic surgery of an ovarian mature cystic teratoma: case report

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## Summary

The possibility of granulomatous peritonitis should be considered when laparoscopy is necessary in patients with ovarian mature cystic teratoma.

**Key words:** Mature cystic teratoma; Laparoscopy; Granulomatous chemical peritonitis.

## Introduction

Cystectomy for ovarian mature cystic teratoma (MCT) has been safely accomplished using a laparoscopic approach due to the increased diagnostic accuracy of current radiologic modalities. Of concern is the propensity for intraperitoneal rupture during laparoscopic removal. The spillage of the content may result in chemical peritonitis and adhesion formation.

We report a rare case of granulomatous chemical peritonitis, which developed on the ileocecum shortly after laparoscopic removal of a MCT of the right ovary.

## Case report

A 24-year-old woman presented with a 15-month history of primary infertility. She had no significant medical history and had not undergone any surgical operations. A pelvic examination confirmed the presence of a large pelvic-abdominal mass. Computerized tomography (CT) scan demonstrated a right ovarian tumor with a homogeneous fatty component surrounding a rounded protuberance-containing area of adipose tissue and small calcifications. The patient's tumor marker profile was within normal range. From these findings, MCT of the ovary was suspected and laparoscopy was performed.

At laparoscopy, there was a right ovarian mass measuring 9 x 8 x 8 cm. The uterus, tubes and appendix appeared to be normal. Aspiration of the cyst was attempted and 300 ml of thick yellow fluid was obtained, along with some hair and sebaceous material. Subsequently the ovary was grasped with the grasping forceps introduced through the operation channel and brought out of the abdomen via the channel in order to remove the cyst pouch. The ovary was then sutured and replaced in the abdominal cavity. During the aspiration, minimal spillage occurred and was managed with vigorous peritoneal cavity irrigation and suction during underwater examination. The postoperative course was uneventful except for right lower quadrant tenderness and low-grade fever for two days and the patient was discharged on the fourth postoperative day. One week after the surgery, the patient presented because of increasing abdominal distention. The patient had a constant low-grade fever for which

she took penicillin without relief. Physical examination revealed moderate right flank tenderness. No masses were felt with pelvic examination. Transvaginal ultrasonography demonstrated no masses in the adnexae or effusions in the cul-de-sac. Pertinent laboratory data included a white blood cell count of 13,000/ $\mu$ l with 80% neutrophils and a serum CRP level of 8.5 mg/dl. CT showed a nodular mass located on the ileocecum. An abscess formation on the ileocecum due to the injury to the ileocecum was suspected with the development of persistent fever, moderate abdominal pain and the findings of computed tomography.

Second-look laparotomy via the transrectal route was performed ten days after the initial operation. At laparotomy, there were no adhesions or granulomas on the uterus or the ovaries. No effusions or contents of the cyst were noted in the cul-de-sac. Several loops of the terminal ileum were fixed and the walls were semi-rigid. The peritoneal cavity was lavaged with saline solution and the adhesions were lysed. Microscopic examination of the substance covering the bowel wall revealed necrotic material with numerous polymorphonuclear cells and a few histiocytes. Some fragments of keratin material were present. Peritoneal fluid showed no growth at 72 hours, and all smears were negative. The postoperative course was uneventful. A small-bowel series seven days postsurgery revealed a normal pattern.

## Discussion

The risk of intraperitoneal spillage during laparoscopic removal of MCT is a controversial issue. A review of the consequence of intraperitoneal rupture of MCT describes a chemical peritonitis that may occur when the peritoneal membranes come into contact with the sebaceous contents of the cysts. A study, which involved the release of dermoid material into the peritoneal cavity in rabbits, showed a significantly increased degree of peritoneal inflammation and adhesion formation compared to controls [1]. There have been clinical reports of granulomatous peritonitis with numerous peritoneal implants and dense adhesion formation, after spontaneous rupture [2, 3], ultrasonography-guided oocyte retrieval [4] and puncture of the cyst at laparoscopy [5].

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Our case is unique because even minimal spillage of the dermoid contents with vigorous peritoneal cavity irrigation and suction resulted in localized glanulomatous peritonitis and dense adhesion formation without any other peritoneal implants. The possibility of localized glanulomatous peritonitis should be remembered as well as that of injury to the intestine when a postoperative patient who had laparoscopic removal of MCT presents with prolonged, persistent or increasing pain and fever. When glanulomatous peritonitis occurs as a complication of laparoscopy, prompt diagnosis and the appropriate treatment will usually result in an uncomplicated recovery.

## References

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# 8<sup>th</sup> CONGRESS OF THE EUROPEAN ASSOCIATION FOR PALLIATIVE CARE

The Hague, The Netherlands, April 2-5, 2003

## PRELIMINARY TIMETABLE

### Wednesday, April 2, 2003

18.30 Opening ceremony.  
Get-together reception.

### Thursday, April 3, 2003

#### 09.00-10.00 Plenary Sessions

Palliative care and geriatrics: the best of both worlds? Are the ethics of palliative care culturally dependent?

#### 11.00-12.30 Parallel Sessions

Panel discussions, workshops,  
free communications,  
discussion sessions, poster highlights.

12.30-14.00

Company sponsored satellite symposium.

12.30-14.30

Lunch break, exhibition and poster visit.

#### 14.30-15.30 Plenary Sessions

Are we killing off morphine?  
The multidisciplinary team: fact or fiction?

#### 16.30-18.00 Parallel Sessions

Panel discussions, workshops,  
free communications,  
discussion sessions, poster highlights.

### Friday, April 4, 2003

#### 08.00-09.00 Meet the Experts

Pain treatment. Consultation services in Palliative care. Care of the imminently dying - How much medical treatment is needed? How is palliative care organised in Europe.

#### 09.00-10.00 Plenary Session

Unpacking fatigue: the pathophysiology of subjective symptoms. Why (not) legalise euthanasia and physician-assisted suicide?

#### 11.00-12.30 Parallel Sessions

Panel discussions, workshops,  
free communications,  
discussion sessions, poster highlights.

12.30-14.00

Company sponsored satellite symposium.

#### 14.30-15.30 Plenary Sessions

Outstanding abstract. How much palliative care does a society need? (*Floriani lecture*)

#### 16.30-18.00 Parallel Sessions

Panel discussions, workshops,  
free communications,  
discussion sessions, poster highlights.

### Saturday, April 5, 2003

#### 08.00-09.00 Meet the Experts

Pain treatment. Opioid rotation - does it work? The palliative care initiatives in US what can we learn in Europe? Audit in palliative care. Children in palliative care.

#### 09.00-10.00 Plenary Session

From the laboratory to the clinic: exploring pain at the molecular level. Sources of inspiration: spiritual and existential issues.

#### 11.00-12.30 Parallel Sessions

Panel discussions, workshops,  
free communications,  
discussion sessions, poster highlights.

12.30-14.00

Company sponsored satellite symposium.

#### 14.30-16.00 Parallel Sessions

Panel discussions, workshops,  
free communications,  
discussion sessions, poster highlights.

#### 17.00-18.30 Plenary Session

Poster award, best free communication,  
EAPC award and lecture.

Free of charge

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