# Acute appendicitis or something else? A case report of cecal endometriosis in emergency setting

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**Riassunto**

*APPENDICITE ACUTA OD ALTRO? CASO CLINICO DI ENDOMETRIOSI CECALE IN URGENZA*

*Il grosso intestino è non insolitamente interessato dalla Endometriosi Extrapelvica, tuttavia la localizzazione al Ceco è quella meno frequentemente riportata in letteratura: la diagnosi differenziale con l'endometriosi intestinale rimane difficile, in special modo in quelle pazienti sottoposte ad intervento in condizioni di emergenza. Gli Autori descrivono un caso di endometriosi intestinale, operato sulla base dei segni clinici di un addome acuto. Dopo laparotomia, il riscontro macroscopico di una lesione cecale che lasciava pensare ad una massa neoplastica, ha indotto l'equipe chirurgica ad effettuare un'emicolectomia destra.*
*Gli Autori dissertano sulle caratteristiche cliniche e sul ruolo della chirurgia nella gestione delle endometriosi extrapelviche nell'emergenza, alla luce delle più recenti acquisizioni cliniche e terapeutiche.*
Parole chiave: Endometriosi, endometriosi del grosso intestino, ceco.

**Abstract**

*Large Bowel is not uncommonly involved by extrapelvic endometriosis, however cecal localization is the lowest reported in literature; the differential diagnosis of intestinal endometriosis remains difficult, especially in those patients who underwent surgery in emergency setting. The Authors report a case of cecal endometriosis, operated on the basis of clinical signs of surgical abdomen. At laparotomy macroscopic appearance of the cecal lesion, suggesting a neoplastic mass, induced the equip to perform a right emicolectomy. The Authors discuss the clinical features and the role of surgery in management of extra pelvic endometriosis in emergency setting, in the light of the newest advances in medical treatment.*
Key words: Endometriosis, bowel endometriosis, caecum.

## Introduction

Endometriosis is defined as the abnormal growth of endometrial tissue outside the uterine cavity. It is estimated that the prevalence of the endometriosis among the menstruating woman range within 8 and 15%, bowel involvement occurs in 3-37% of the cases, with a 3,5% of caecum localization. Reported rate of bowel resection for endometriosis is lower than 1% (1, 2, 3). The low prevalence of caecal endometriosis and the not specific presentation of the disease contribute to underestimate the problem, especially in those patients who undergo surgery for an acute abdomen. It is also known that "Acute Abdomen is one of the most difficult Challenge for a surgeon". Getting a good Diagnosis before operation means the best surgical treatment, but it is not always possible in emergency setting (4). We report a case of Endometriosis of the caecum in a patient who underwent surgery for a suspected acute appendicitis. Caecal mass, with neoplastic features, in absence of appendicitis, seen during the operation, required a standard right emicolectomy. The authors discuss the role of emergency surgery in the treatment of this unusual disease.

## Case report

A 28-year-old woman was admitted in emergency setting at Author's Department of emergency surgery of a tertiary level hospital for right lower quadrant pain and fever, recurrent pelvic discomfort associated with her

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period, not associated with other chief symptoms. The abdominal examination revealed severe right lower quadrant tenderness, MacBurney and Blumberg sings were positive. All routine laboratory blood tests were within the normal range, serum bHCG was also tested and it resulted negative. Abdominal ultrasound, disturbed by intestinal gas was performed with no pathological finding. A diagnosis of Acute Appendicitis was made on clinical findings, the patient underwent surgery; MacBurney incision was performed, little amount of peritoneal fluid was yielded, appendix was of normal aspect, at the intestinal inspection an eteroplastic hard mass involving the posterior lateral wall of the caecum was found, the right ovary appeared of normal aspect, instead of the left one which was inflamed, a standard right emicolectomy was performed. At the pathology the gross examination revealed, on excised large bowel, consistent in 3 cm of terminal ileum and 11 cm of ascending colon, a grey neoplasia, with brown foci, of 2 cm of diameter, involving serosa to muscularis propria of the posterior lateral caecum wall, mucosa was not involved. Glandular appearance of the neoplasia, with haemorrhagic content and haemosiderin deposit, at light microscopy, suggested the diagnosis of Colonic Endometriosis. 18 mesocolic lymph nodes were found negative. The appendix was chronic inflamed. Patient's postoperative course was uneventful, she was discharged 10 days later.

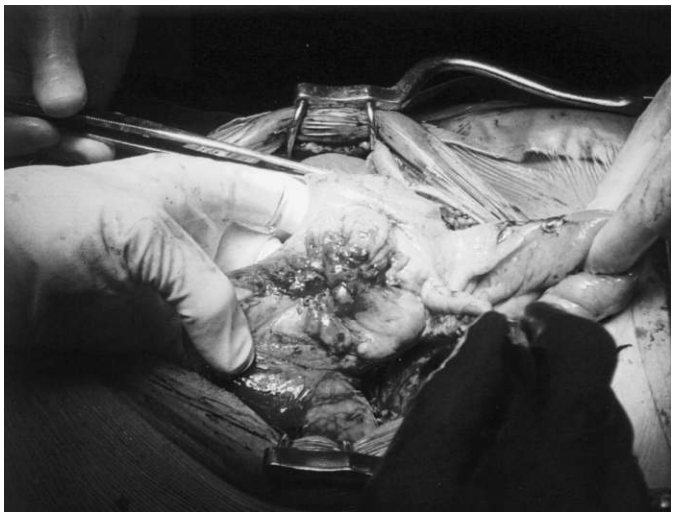

Fig. 1: Endometriosis involving the posterior lateral wall of the caecum.

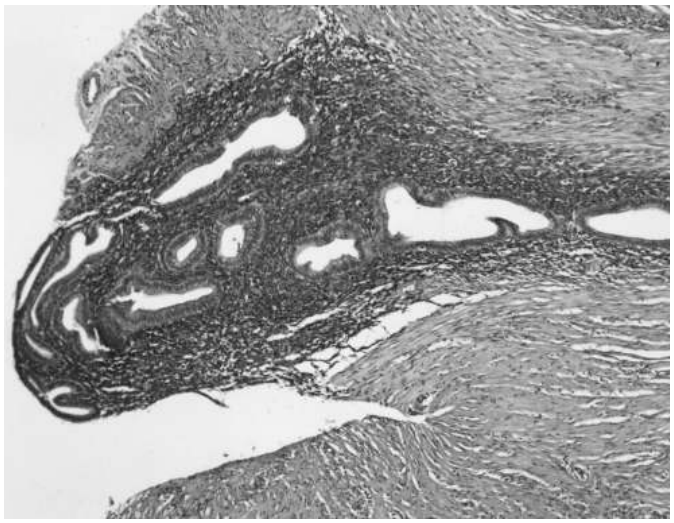

Fig. 2: Cross-section of the wall of caecum showing endometrial foci. Haematoxylin and Eosin 10X.

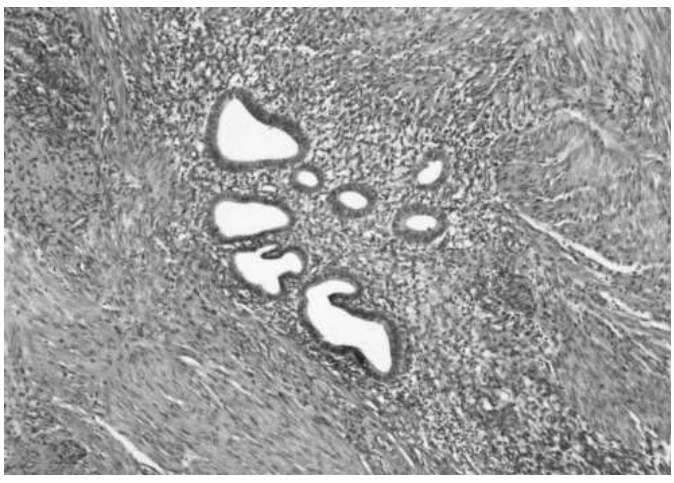

Fig. 3: Cross-section of the wall of caecum at high magnification showing a lot of endometrial glands and stroma. Haematoxylin and Eosin 40X.

## Discussion

In emergency the abdominal pain implicates many questions that the surgeon must answer, he often must take from the macroscopic appearance at laparotomy to decide how the operation has to be carried on. This aspect is much more emphasized in those cases where the intraoperative frozen section examination is not available, for example in emergency setting and particularly during night. The case reported faces all this pitfalls, the macroscopic appearance of cecal lesion, involving serosa layer, with peripheral edema and a stenotic behaviour, suggests a diagnosis of cecal neoplasia (Fig. 1). The patient's age and prognostic considerations induced the surgical equip to perform a standard colonic resection which, in this case, means a right emicolectomy. The pathology revealed an intestinal endometriosis (Fig. 2, Fig. 3). The prevalence of pelvic endometriosis is estimated to be within 10 and 20% among the menstruating women, but it is estimated to be higher in post menopausal female population, lesser than 34% (3). In Italy, a multicentric study, involving 30 specialized centres, reports a pelvic endometriosis prevalence of 12% in those women who underwent surgery for uterine leyomiofibromas (5).

Endometriosis lesions are characterized by the presence endometrial tissue isle in ectopic site. These lesions are often hard and grey-blue coloured. At microscopy many

nodules with hemorrhagic content and Haemosiderin deposit in stromal and glandular tissue are usual to be found.

The endometriosis could be classified into two categories: internal and external one; the growth of endometrial tissue among the miometrium layer is classified as internal endometriosis, instead of the external one in which the endrometrial tissue growth in extrauterine site, the last one is almost always localized in the pelvis. The prevalence of extra pelvic endometriosis is lowest one, and it varies from site to site. Extra Pelvic Endometriosis could involved the bowel, the urinary tract, the chest and lungs (6). The abdominal surgical wounds localization is also reported (7, 8). The prevalence of intestinal localization is lesser than 25%. The intestinal endometriosis involved the small bowel in 7%, the cecal tract in 5%, the sigma and the rectum in 71% of cases (9). The clinical presentation is pleomorfic, chronic or recurrent abdominal pain, acute lower quadrant pain, cyclic rectal bleeding, dyschezia (10). All these symptoms are almost always cyclic and associated with the period. This feature, when investigated, could lead to suspect the diagnosis. The differential diagnosis, especially in emergency setting, is difficult and often the surgical indication is based on clinical presence of acute abdomen. When the endometriosis is suspected a laparoscopic look is the procedure of choice (11). The laparoscopic procedure permits to view and yield tissue fragments from suspected lesions to be analysed by the pathologist (12). In spite of good efficacy of the endometriosis medical management, especially in pain control and symptoms relief treatment, surgery is still considered the treatment of choice in the management of bowel localization (1, 2). The estimated risk of cancer transformation of intestinal endometriosis is less than 1% (13, 6). When endometriotic tissue involves the bowel muscular layer, the induced muscle cell hyperplasia and fibrosis seems to be resistant to hormonal therapy, thus surgical resection is required (1, 10, 14). The removal of the ovaries is considered a favourable prognostic factor, nevertheless the reproductive capability is of a major impact in outcome of fertile patients, in which the young age deals with complications induced by physiologic derangement of anticipating surgical menopause, thus in this group conservative surgery is acceptable and reversible medical induced unovulatory status represents a good alternative.

## Conclusions

The diagnosis and the management of patient with acute abdomen represent "one of the most difficult challenges for surgeon". The diagnostic definition of abdominal acute pain must rest on acquisition of data inherent to clinical history and physical examination of patient. It is allowed to have a clinical suspect of endometriosis when pain symptoms are recurrents and when the clinical history is positive for dyspareunia and severe dysmenorrhea, in particular during the end period. Therefore the suspect of endometriosis is justified in women in fertile age with cyclic alterations of function of an organ or a system. At physical examination, must be performed a careful gynecologic medical, complemented with the bimanual palpation, for demonstrate the possible uterosacral nodularity or the possible presence of an annessial mass. In emergency it is not ever feasible one accurate and detailed diagnosis, and so the role of instrumental exams could turn out useful, in particular the ultrasonographic exam. In emergency if data obtained address to surgical management, the operation takes on a particular role, because it is possible to determine the correct diagnosis with the objective look and the potential frozen section of lesions, leading to adequate treatment directly at operating table. The store of informations necessary at emergency surgeons must include the knowledge of clinical aspects and of surgical techniques to solve an acute clinical picture of extragenital endometriosis.

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