

# Late Retroperitoneal Hematoma with Abscess Formation Following Laparoscopic Staging of Endometrial Cancer

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## Abstract

Herein, we report a case of a 63-year-old, nonobese, woman who underwent laparoscopic surgical staging for endometrial cancer with pelvic and para-aortic lymph node dissection. After being discharged, the patient presented to the emergency department with fever and abdominal pain, 1 week after the procedure. Abdominal tenderness, fever, and anemia were the key clinical and laboratory findings. A computed tomography (CT) scan revealed a cystic mass with air bubbles, located in the right iliopsoas region. The features were consistent with an infected hematoma at the right iliopsoas region, which was managed with antibiotics and CT-guided pigtail drainage. Laparoscopic surgical staging for endometrial cancer has been shown to have fewer early complications than open surgery. However, complications can still occur in the most experienced hands. Abscess arising from hematomas after laparoscopic surgical staging can be managed adequately with noninvasive CT-guided drainage.

**Keywords:** Abscess, endometrial cancer, hematoma, laparoscopic staging surgery

## INTRODUCTION

Laparoscopic surgical staging for endometrial cancer has been shown to be feasible and safe, with lesser early complications and shorter hospital stay than traditional laparotomy.<sup>[1-6]</sup>

Retroperitoneal abscess from a hematoma after laparoscopic gynecologic surgical staging has not been described in literature. We believe that this case aware and may be teaching to those who perform this procedure, in terms of prevention, diagnosis, and management.

## CASE REPORT

A postmenopausal 63-year-old woman, Gravida 8, Para 3, Artificial Abortion 5, BMI of 27 kg/m<sup>2</sup>, underwent laparoscopic surgical staging for endometrial cancer with pelvic and para-aortic lymph node dissection. No complications were observed, and a drain was placed in the cul-de-sac, being removed on postoperative day 6, due to residual drainage. Two days after discharge (postoperative day 8), the patient presented to the emergency department with fever (38.5°C) and mild abdominal pain. The patient also reported decreased urinary frequency and constipation for the previous 2 days. Physical examination revealed an acute-ill appearance and

febrile patient with mild abdominal tenderness. Laboratory data showed normocytic anemia, (hemoglobin concentration of 7.2 mg/dL), elevated white blood cell count (15.8), and elevated C-reactive protein concentration (302 mg/L). After receiving 4 units of packed red blood cells, an abdominal and pelvic computed tomography (CT) was performed. It revealed a cystic mass measuring 6.8 cm × 4.5 cm, with air bubbles, in the right iliopsoas region and with anterior displacement of the vessel, compatible with abscess and postoperative hematoma [Figure 1]. The patient was admitted for further evaluation and management. Intravenously (IV) ceftriaxone and metronidazole were given, but the patient remained febrile and with no significant improvement of her general condition. A comparison CT was performed, and the cystic mass' characteristics remained similar. Therefore, CT-guided 8 French pigtail drainage was inserted percutaneously, and the kept until postoperative day 33 (for 15 days) when complete remission of the described

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**How to cite this article:** Casanova J, Sicam RV, Moreira-Barros J, Huang KG. Late retroperitoneal hematoma with abscess formation following laparoscopic staging of endometrial cancer. *Gynecol Minim Invasive Ther* 2018;7:31-2.

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10.4103/GMIT.GMIT\_3\_17



**Figure 1:** Computed tomography scan revealing a cystic mass, with air bubbles (red arrow) compatible with abscess

abscess was achieved. Antibiotics were also shifted to imipenem, cilastatin, and vancomycin after blood culture-sensitivity studies revealed *Bacteroides fragilis* and *Clostridium* sp. The patient was discharged at postoperative day 34, without recurrence of the abscess on the outpatient follow-up. The final surgical-pathologic stage was T1AN0M0, International Federation of Gynecology and Obstetrics Stage IA, Grade 1 endometrioid adenocarcinoma with superficial myometrium invasion.

## DISCUSSION

Hematoma formation after laparoscopic surgical staging for endometrial cancer has been reported to be 0.5–2%.<sup>[1,4,6,7]</sup> Unlike major vascular injuries that can be catastrophic, hematomas may have a more insidious course. Tinelli *et al.* describe a case of hematoma diagnosed in the first 24 h after total laparoscopic hysterectomy with lymphadenectomy for early-stage endometrial cancer through a net decline in baseline hemoglobin. Conversion to laparotomy was averted by laparoscopic drainage and hemostasis.<sup>[4]</sup>

In our case, we believe a venous bleeder was inadequately coagulated resulting to a hematoma. Its location in the iliopectus region suggests that the bleeder was either in the infundibulopelvic ligament or the beds of retroperitoneal lymph node dissection. Increased intra-abdominal pressure may have concealed it during hemostasis. The hematoma, along with devascularized cauterized tissue, cellular debris and lymphatic fluid, was an ideal nidus for infection. In the absence of apparent bowel injury, anaerobic bacteria from the vaginal vault may have colonized the hematoma hence the formation of the retroperitoneal abscess.

Abscess formation after laparoscopic surgical staging for endometrial cancer has been reported to be ~1%.<sup>[3,6-8]</sup> In a retrospective study of 30 patients who underwent total laparoscopic hysterectomy and lymphadenectomy for endometrial cancer, one case of pelvic abscess was reported and managed with IV antibiotics and CT-guided drainage. CT-guided percutaneous drainage is an effective, well-established, non-invasive means of treatment of pelvic abscess.<sup>[7]</sup> In the past, abscesses at the

iliopectus region were difficult to diagnose due to their nonspecific symptoms. However, the availability of CT scan has made diagnosis and treatment straightforward.<sup>[9]</sup> In our case, drainage may have been initiated earlier to shorten the clinical course.

As more surgeons adopt the minimally invasive approach for complex gynecologic surgeries, we must understand that complications may occur even in the most experienced hands. The surgeons, in this case, had 20 years of laparoscopic experience. Meticulous hemostasis can be achieved by decreasing intra-abdominal pressure to detect occult bleeders. This also underscores the importance of basic aseptic techniques, separation of vaginal and abdominal instruments, proper vaginal prepping, and standard prophylactic antibiotics for clean-contaminated surgery.

## Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

## Financial support and sponsorship

Nil.

## Conflicts of interest

There are no conflicts of interest.

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