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# Postoperative Pelvic Hematoma an Unusual Case After Surgical Treatment of Ectopic Pregnancy

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## Abstract

**Aim:** Postoperative pelvic hematoma is almost a universal consequence of gynaecologic surgery. It occurs especially after vaginal or abdominal hysterectomy. To our knowledge, so far no case of pelvic hematoma after surgical treatment of ectopic pregnancy was described in the literature.

**Case report:** This case report describes a pelvic hematoma that occurred after surgical treatment of ectopic pregnancy. The hematoma was infected and resolved spontaneously. The patient, a North African woman, was given antibiotic treatment for two weeks. During 4 months of follow-up, the size of the hematoma decreased down to 59.5% of the initial size. Monitoring of the patient is still continuing.

**Conclusion:** Postoperative pelvic hematoma can be diagnosed in the early postoperative period of gynaecologic surgery. Sometimes it resolves spontaneously.

**Keywords:** Ectopic pregnancy; Hematoma; Postoperative pelvic

## Introduction

One of the major complications of pelvic surgery is symptomatic pelvic hematoma, which is an accumulation of blood outside of blood vessels. It happens as a result of blood vessel damage, and blood abnormal leakage into tissues. Pelvic hematoma may be associated with pain, fever, and foul-smelling discharge. Most of what is published so far on symptomatic postoperative pelvic hematoma is limited to vaginal or abdominal hysterectomy. Ultrasound is used routinely nowadays to diagnose the hematoma in the incipient stage without causing discomfort to the patient.

We present an unusual case of pelvic hematoma that was infected after surgical treatment of ectopic pregnancy.

## Case Report

The patient is fourty year's old and multiparous North African woman. Two days before her admission to another medical facility, she suffered a relatively low abundant bleeding, with amenorrhea of about 1 month. The patient was operated because she was suspected to have ectopic pregnancy. She underwent a right salpingectomy in the same hospital and later on she developed swelling at the abdominal level, in addition to vomiting and epigastric pain. Due to these complications she was sent to our hospital.

Because the surgery was made elsewhere, we could not get detailed salpingectomy report. On her admission, the patient had mild fever (38°C), with slight mucocutaneous pallor, and a painless pelvic mass. This mass was reaching halfway to the umbilicus, but its size was not well defined. Her hemoglobin level was 8 g/dl. Pelvic ultrasonography (Figure 1) showed presence of a 111 mm wide, anechoic and avascular right adnexal.Since the patient was operated elsewhere and we did not have a detailed report, we suspected a, postoperative pelvic hematoma or possibly an ovarian tumor. So a pelvic CT was performed showing an image for a pelvic hematoma and likely is infected. The hematoma was 163 mm wide with partitioned ascites. Due to these findings, we decided to follow up using ultrasonography.

The patient was given antibiotic treatment for two weeks with subsequent good clinical improvement.

Four months after the treatment, the hematoma size decreased (59.5%) and the patient was set for a continuous follow up (Figures 2 and 3).

## Discussion

Ectopic pregnancy, in which the gestational sac is outside of the uterus, is the most common life-threatening emergency in early pregnancy. The reported rate of ectopic pregnancy ranges from 6.4 to 10 per 1000 pregnancies [1]. 90% of all ectopic pregnancies are located in the fallopian tube, and 80% of those are located in the ampullary segment of the tube [2].

Surgery is specifically indicated in cases of suspected tubal rupture and when methotrexate is contraindicated. It can be made by laparoscopy or laparotomy to gain access to the pelvis and to incise the affected fallopian and remove only the pregnancy (salpingostomy) or remove the affected tube with the pregnancy (salpingectomy).Short-term complications may include infections, blood loss, unintentional

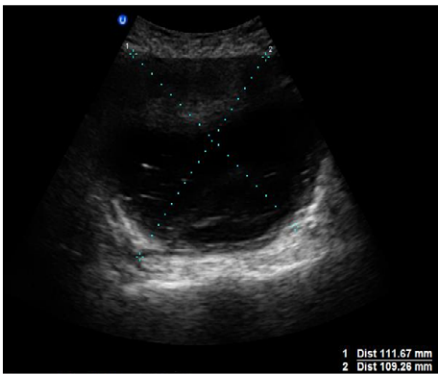


**Figure 1:** Ultrasound showing an echogenic mass (hematoma) of 111 mm.

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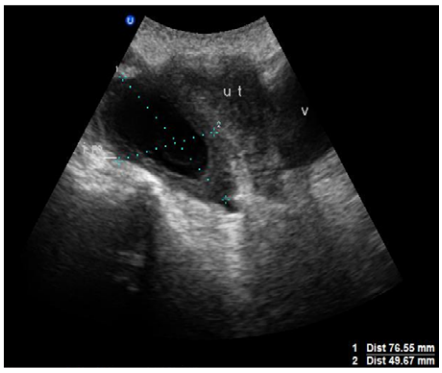


**Figure 2:** Ultrasound showing the decrease in the size of the hematoma, after one month (76.55 mm).

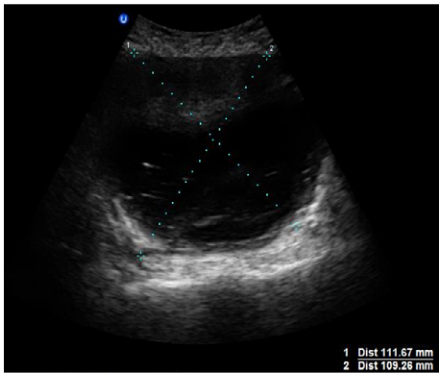


**Figure 3:** Ultrasound showing the decrease in the size of the hematoma, after four months (66.01 mm).

bladder injury and hematoma, which can cause serious morbidity if it gets large and infected.

Postoperative pelvic haemorrhage may result from any type of pelvic surgery, including general surgery, colorectal, orthopedic, urologic and gynaecologic surgical procedures. Factors leading to vascular injury include oncologic resection (65%), difficult anatomic exposure (63%), previous operation (48%), recurrenttumor (28%), and radiation therapy (20%) [3]. In the presented case, pelvic hematoma occurred after surgical treatment of ectopic pregnancy.

The few reports describing pelvic hematomas after vaginal hysterectomy give a wide incidence range of 19-98% [4]. While small-size hematomas are far more common than large-size ones, the latter are associated with higher rates of febrile morbidity [5].

Kansaria et al. reported 8% out of which 25% were larger than 4 cm and needed vaginal drainage [6]. Thompson et al. found pelvic hematomas in 25% of patients after vaginal hysterectomy, with a significant correlation to postoperative morbidity, including blood loss, anemia and readmission to the hospital [4]. A few studies report on hematoma after reconstructive pelvic procedures other than vaginal hysterectomy, usually not as a main outcome measure [7]. To our knowledge, no case of pelvic hematoma after surgical treatment of ectopic pregnancy was described in the literature; even it is not a clean complication of salpingectomy.

Post operative pelvic hematoma can cause pain, fever, discharge, diarrhea, and mild abdominal distension, and if large, even paralytic ileus.Since most studies describe fever as a common finding in women with pelvic hematomas [4], it seems that infection and/or inflammation play an important role in the pathophysiology of postoperative pelvic hematomas.

Large-volume hematoma may become long-standing as they are less amenable to fibrinolytic activity and may eventually become infected. They may also become symptomatic as they tend to be closely related to the bladder and/or lower gastrointestinal tract. Moreover, large-volume infected hematomas may be less accessible to systemic antibiotics and may therefore require surgical drainage. The fact that intraoperative blood loss and early postoperative hemoglobin values were not significantly different in patients with symptomatic pelvic hematoma as compared to controls implies that this hematoma may have developed insidiously over several days postoperatively [8].

It is difficult to diagnose hematoma by routine clinical examination in the early postoperative period. With the help of ultrasound scan, it is possible to diagnose the hematoma in the incipient stage without causing discomfort to the patient.

Ultrasound, being an accessible, non-invasive and accurate diagnostic tool, seems to be the modality of choice for diagnosing postoperative pelvic hematoma. It also allows for effective characterization and follow-up of the hematomas' size and texture and may show other findings such as air-fluid level, gas bubbles and urinary retention. Ultrasound also seems to be the modality of choice for guiding hematoma drainage [9].

Several studies regarding the postoperative morbidity and complications following hysterectomy has also been done by Harris et al. [10] who also observe an increased rate of fever and infection following surgery especially hysterectomy. Tincello [11] does not advocate routine postoperative sonographic scanning.

Surgical outcome of patients with symptomatic pelvic hematoma has not yet been reported (Medline search of the English literature from 1966 to 2010 using the terms: "hematoma", "hysterectomy", and "pelvic surgery").

No statistically significant association was demonstrated between the presence of a hematoma and surgical approach, experience, duration of operation, concomitant medical conditions or per operative blood loss [12].

## Conclusion

Postoperative pelvic hematoma can be diagnosed in the early postoperative period and the most are described after hysterectomy. Medium and large sized hematoma with clinical symptoms like persistent high fever and gastrointestinal symptoms need rescan and intervention if necessary. Sometimes they resolve spontaneously.

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