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Emergent gynecological operations: A report of 105 cases

Acil jinekolojik operasyonlar: 105 olgunun değerlendirilmesi

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ABSTRACT

Objectives: To evaluate the clinical characteristics of patients that hospitalized with acute abdominopelvic pain (AAP) and underwent emergent gynecological operations in obstetrics and gynecology clinics.

Methods: This retrospective study was performed at Dicle University Hospital, Department of Obstetrics and Gynecology, from June 2006 to May 2009. The data were collected from hospital records and patients charts. The age, gravidy, parity, last menstrual period, physical examination findings, initial complaints, operation diagnosis, preoperative and postoperative hematocrit values, the type of the operation that performed and the amount of blood products transfusions were investigated.

Results: During the study period, a total of 105 patients were operated due to characteristic clinical sign and symptoms of acute abdomen. The initial complaints were abdominopelvic pain in 62 patients (59.0%) and abdomino-pelvic pain with vaginal bleeding in 43 patients (41.0%). Of all cases; 60 (57.1%) women had ruptured ectopic pregnancy, 29 (27.6%) had corpus hemorrhagic cyst rupture. Only 68 (64.76%) of the cases were subjected to laparotomy under emergency conditions, while 37 (35.2%) of them were subjected to laparoscopy. Fifty five (52.4%) women needed blood products transfusion.

Conclusion: The initial evaluation of abdominopelvic pain related to gynecologic causes should include taking a careful history, performing abdominopelvic examination, pregnancy test, laboratory studies and color Doppler ultrasound. Although the patients can be followed conservatively, they may need an emergent surgery for life saving. *J Clin Exp Invest 2010; 1(1): 12-15*

Key words: Acute abdomen, emergent gynecologic surgery, clinical characteristics, causes.

ÖZET

Amaç: Kadın Doğum Kliniğinde akut abdominopelvik ağrı nedeniyle acil olarak opere edilen hastaların klinik özelliklerini değerlendirilmesi.

Yöntemler: Bu retrospektif çalışma Dicle Üniversitesi Tıp Fakültesi Obstetrik ve Jinekoloji Kliniğinde yapılmıştır. Akut abdominopelvik ağrı nedeniyle Haziran 2006-Mayıs 2009 tarihleri arasında opere edilen 105 hasta geriye dönüşlü olarak değerlendirilmiştir. Hastalar operasyon tanısı, yaş, gravida, parite, son adet tarihi, geliş şikayeti, fizik muayene bulguları, operasyon öncesi ve sonrası hematokrit seviyeleri, transfüze edilen kan ürünleri miktarı ve yapılan operasyon şekli açısından değerlendirildi. Hasta bilgileri hastane kayıtlarından elde edildi.

Bulgular: Belirtilen süre içerisinde 105 hastanın akut jinekolojik nedenlerle opere edildiği saptandı. Geliş şikayeti 62 (59.0%) hastada abdominopelvik ağrı iken, 43 (41.0%). hastada ağrıya eşlik eden vaginal kanama şikayeti mevcuttu. Altmış (57.1%) hasta rüptüre ektopik gebelik nedeniyle ve 29 (27.6%) hastanın rüptüre over kisti nedeniyle opere edildiği saptandı. Acil koşullar nedeniyle 68 (64.8%) hastada laparatomi ile 37 (35.2%)'sinde ise laparaskopi ile opere edildiği saptandı. Elli beş (52.4%) hastaya kan transfüzyonu yapılmış olduğu görüldü.

Sonuç: Jinekolojik nedenli akut abdominopelvik ağrının başlangıç değerlendirilmesi; dikkatli alınmış anamnez, abdominopelvik fizik muayene bulguları, gebelik testi, laboratuvar bulguları ve renkli Doppler ultrasonografi ile incelemeyi içermelidir. Hastalar konservatif olarak takip edilmekle birlikte, hayat kurtarıcı acil cerrahi girişim gerekebilir. *Klin Den Ar Derg 2010; 1(1): 12-15*

Anahtar kelimeler: Akut abdomen, acil jinekolojik cerrahi, klinik özellikler, nedenler

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INTRODUCTION

Gynecologic disorders presenting with acute abdominopelvic pain (AAP) may be benign and self limiting or negatively affect fertility capacity if not treated. The incidence is calculated as 1.5% of office based visits and 5% of emergency department admissions[1].The delay in diagnose and treatment may lead to worse outcomes[2]. AAP may be related to the pregnancy. The indication of emergent surgical exploration is based on the patient's history, physical examination, laboratory findings and imaging studies. High resolution transvaginal ultrasound helps the clinician to make the diagnose of exclusion for AAP[3]. The most frequent causes of AAP that warranted urgent gynecologic operation are ruptured ectopic pregnancy (REP), ruptured ovarian cyst (ROC), adnexal torsion, and tubo-ovarian abscess (TOA). One of the most important aims is to preserve the reproductive capacity in management of AAP[4].

The aim of this study was to evaluate the clinical and laboratory characteristics and outcomes of the patients that emergently operated due to gynecologic AAP.

METHODS

This retrospective study was performed at Dicle University Hospital, Department of Obstetrics and Gynecology, from June 2006 to May 2009. The data were collected from hospital records and patients charts. The age, gravidy, parity, last menstrual period (LMP), physical examination findings, initial complaints, operation diagnosis, preoperative and postoperative hematocrit values, the type of the operation and the amount of blood products transfusions were evaluated. The patients that operated for AAP included in this study, and the patients that not operated were excluded from the study. Decision for emergent operation was done based on the physical examination, ultrasonographic findings of intraabdominal hemorrhage or suspected ovarian torsion. All patients had abdominal tenderness, defense, and rebound on physical examination. If a patient considered as AAP, we firstly focused on the location, time, and additional symptoms of the pain. Also LMP and the pregnancy was considered. All of the studied cases were evaluated by ultrasound (Voluson 730 PRO). After detailed abdominal examination, ultrasonography is recommended to evaluate the genital organs and the presence of hemoperitoneum. Cases with decreasing hematocrit values that considered to internal hemorrhage, loss of Doppler flow of ovaries and large amounts of hemoperitoneum are the indications of laparotomy/laparoscopy at our clinic. A total of 68 (64.8%) of the cases had laparotomy and 37 (35.2%) had laparoscopy. The laparotomy or laparoscopy decision was given according to the amount of intraabdominal hemorrhage and hemodynamic status of the case. All of the patients were operated at their first day of hospitalization.

For statistical analysis, the mean, standard deviation (SD) and percentage values were calculated for continuous variables.

RESULTS

During this period, 2452 cases operated for different gynecological causes at our clinic. Of these cases, 105 (42.8%) were subjected for gynecological acute abdomen. The initial compliant was abdominopelvic pain in 62 (59.0%) patients and vaginal bleeding accompanied to abdominopelvic pain in 43 (41.0%) patients. The mean age of the cases were 27.4 ±6.3 years (range 14 to 51 years), gravidy 2.6± 2.1 (range, 0 to 8), parity 1.79±1.85 (range, 0 to 8). Sixty patients (57.1%) were operated for ruptured ectopic pregnancy. We observed REP as the most frequent cause of gynecologic acute abdominopelvic pain that need emergent operation. The second cause was ruptured ovarian cyst in 29 (27.6%) cases. The operation indications and demographic characteristics of the patients are shown in Table 1.

Table 1. The demographic and clinical characteristics of the patients

Diagnose	n (%)	Age	Gravidy	Hct1	Hct2
REP	60 (57.1)	28.9±6.1	3.3±1.9	31.0±4.0	26.6±2.8
ROC	29 (27.6)	25.5±5.7	1.6±1.8	32.6±5.5	28.6±4.4
Adnexal torsion	12 (11.4)	24.4±6.7	1.9±2.3	33.7±4.4	29.5±2.6
Endometrioma cyst rupture	2 (1.9)	23.3±4.2	1.4±0.9	33.3±5.6	29.3±2.4
Tubo-ovarian abscess	2 (1.9)	39.3±10.2	3.0±1.8	38.5±5.4	34.0±3.2

REP: Rupture ectopic pregnancy, ROC: Rupture ovarian cyst, Hct: Hematocrit, Hct 1: Preoperative, Hct 2: Postoperative

The last menstrual period of patients operated for REP was 48.7±15,9 days (20 to 90 days). The preoperative β-Human chorionic gonadotropin (HCG) values of REP cases were 1801±2017 m IU/ml (0-9880). Forty two (70%) patients with REP subjected to laparatomy and 18 (30%) underwent laparoscopy. The operation types performed to REP cases were salpengectomy in 30 (28.6%) cases, 27 (25.7%) salpingostomy (Table 2).

Table 2. The surgical operation types of the cases

Operation Indication	Operation Type	n (%)
REP (42 laparotomy, 18 laparoscopy)	Salpengectomy	30 (28.6)
	Salpingostomy	27 (25.7)
	Uterine horn excision/milking	2 (1.9) / 1(0.9)
ROC	Cyst extirpation	16 (15.2)
	Cauterization	11 (10.5)
	USO	2 (1.9)
Torsion	Detorsion	7 (7.6)
	USO	6 (4.8)
Endometrioma Rupture	Cystectomy	2 (1.9)
TOA	Abscess drainage	2 (1.9)

REP: Ruptured ectopic pregnancy, ROC: Ruptured ovarian cyst, TOA: Tubo- ovarian abscess
USO: Unilateral salpingooferectomy

The operation types performed to ROC cases were cystectomy in 16 (15.2%), cauterization in 11(10.5%) patients and unilateral salpingo-ooferectomy (USO) in 2 (1.9%) cases. Twenty four patients were operated for ROC was in their luteal menstrual period and five of them were in follicular period.

In 12 (11.4%) of the patients the cause of AAP was adnexal torsion (AT). Of the adnexal torsion cases; seven (7.6%) underwent detorsion and three USO and two dermoid cyst extirpation and detorsion. Two cases were found as ruptured endometrioma cyst and two ruptured TOA performed intraoperatively.

Fifty five (52.4%) of the cases received a mean of 2.3±0.9 units of blood products transfusions. The mean hematocrit values of patients that blood transfusion needed were 29.5±3.9 preoperatively and 25.4±2.7 postoperatively.

DISCUSSION

Gynecological emergencies are wide spectrum conditions from benign events to life threatening hemodynamic shock. The most important points in the management are accurate and fast diagnosis, and appropriate management with preserving sexual function and fertility. Most of these patients present with acute abdomen, abnormal vaginal bleeding or a combination of both. The developments of ultrasonographic imaging, serial biochemical pregnancy tests and minimal invasive surgery have given opportunity for early diagnosis and conservative treatment[5].

In this present study, we evaluated the patients which operated for gynecologic emergencies by laparotomy or laparoscopy at our clinic with AAP diagnosis. The great majority of the cases were operated with REP diagnosis. Most of the cases had hemoperitoneum, if the patient had an impaired hemodynamic situation then we performed urgent operation. The second diagnosis for AAP was ROC. These cases most interfere with the ectopic pregnancy; therefore we had studied the ß HCG levels in all the cases applied to our clinic with AAP. Adnexal torsion, rupture of the endometrioma cyst and TOA were the other rare causes of AAP. Patients with endometrioma were operated for the rupture of

the cyst, the content of the cyst irritate the peritoneum and the cases had severe abdominal pain.

Clinicians should be aware of pregnancy when women admitting to emergency department with abdominal pain, especially in reproductive period of life. One of the most common causes of abdominal pain that needs surgery is ectopic pregnancy (EP). Delay in diagnosis and treatment lead to poor prognosis in patients with EP. EP was first described in 1693, however despite developments in diagnosis techniques and understanding mechanism, it is still a leading cause of maternal death in first trimester of pregnancy[6]. The clinical presentation may have a spectrum from asymptomatic to hemorrhagic shock due to intraabdominal hemorrhage[7]. If the patient goes in to shock, urgent laparotomy should be performed. Laparoscopy is the gold standard technique when the patient is hemodinamically stable but the decision of laparoscopy depends and the surgeon's experience and the amount of intraabdominal hemorrhage[8]. Both in laparotomy and laparoscopy, patients may undergo salpengectomy or salpingostomy. The decision to perform a salpengectomy or a salpingostomy will depend on the size of the EP, the damage to the tube and the health of the contra lateral tube[9]. Yao and Tulandi, reported no significant difference in rate of intrauterine pregnancy following salpingostomy (53%) and salpengectomy (49.3)[10]. The most frequent cause of AAP was found to be as EP in our study.

The second operation indication was rupture of the ovarian cyst (ROC). Detailed history, careful abdominal examination and abdominal and/or transvaginal ultrasonography (TUSG), are the methods for diagnosis of ROC. The sign and symptoms of ROC is generally the same with EP. If the amount of hemorrhage is abundant and leads to shock emergent laparotomy is required, but if the case is hemodinamically stable diagnostic and operative laparoscopy may be appropriate[7]. 18 (17.1%) of our ROC cases were subjected to laparotomy and 11 (10.5%) laparoscopy.

Adnexal torsion was another cause of abdominal pain. This situation is generally related to an adnexal mass but also adnexal may be torsionated when there is not a mass. The incidence of AT is increasing due to the artificial reproduction techniques, especially in case of hyperstimulation. The patient with negative pregnancy test helps the clinician in AT diagnosis[7]. The cases thought to be AT should be evaluated with color Doppler pelvic ultrasound. A normal Doppler flow should not exclude the possibility of torsion in a patient who has an acute abdomen[11]. We evaluated our patients with color Doppler ultrasound who applied to our clinic with acute abdomen diagnose, and the findings were so helpful in AT diagnose. Previous approaches were including salpingo-oophorectomy, but recently the studies are advising conservative treatments such as detorsion even if there is necrosis in the adnex[12]. Most of our patients had detorsion in present study. The other operation indications in our study were rupture of endometrioma cyst and rupture of TOA.

In conclusion, the causes of AAP in our study were similar to previous studies. The initial evaluation of abdominal pain in a woman should include taking a careful history, performing abdomino-pelvic examination, pregnancy test, laboratory findings and color Doppler ultrasound. These patients may be followed up conservatively, but they may need emergent surgery for life saving.

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