

# An Experience of Gynecological Emergencies in a Teaching Hospital in Rawalpindi, Pakistan: A Retrospective, Analytical Study

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## Abstract

**Objective:** To investigate the frequency of surgical emergencies managed by the gynecology and obstetrics department at our hospital

**Methodology:** This retrospective, analytical study was conducted from Sept 2022 to Mar 2023 at the Department of Obstetrics and Gynaecology in Fauji Foundation Hospital, Rawalpindi. Following a careful selection process, patients were enrolled in the study and reviewed the medical records of all admitted patients. We collected detailed gynecological histories, including information on age, pain onset, duration, and location, and menstrual history.

**Results:** A total of 64 patients were included in the study. The majority (68%) were married and lived in an urban area. Most patients (50.0%) were multiparous, 30.0% were primiparous and the rest of the 20.0% were Nulliparous. Ruptured ectopic pregnancy was the most common diagnosis (47.0%). Other diagnoses included: acute pelvic inflammatory disease (PID) (12.0%), ovarian cyst torsion (8.0%), acute abnormal uterine bleeding (15%), post-coital tear and dermoid cyst (each 8%). Out of all gynaecological emergency cases, medical management was given to (28.0%) of all study subjects. Few patients also underwent total abdominal hysterectomy (TAH) with or without bilateral salpingo-oophorectomy (BSO). Ovarian cystectomy and post-coital repair were performed in few cases.

**Conclusion:** It's crucial to consider gynaecological emergencies when dealing with sudden health problems in women. Recognizing these conditions early and getting patients to the right specialist quickly leads to better sexual health, fertility, and emotional well-being in the long run.

**Keywords:** Acute PID, AUB, Dysmenorrhea

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## Introduction

Gynecological emergencies are serious conditions affecting the female reproductive system that can threaten a woman's life, sexual health, and future fertility. These emergencies often cause sudden severe abdominal pain, abnormal vaginal bleeding, or both. Common causes include complications during early pregnancy, pelvic inflammatory disease (PID), and problems with contraception.

Gynecological disorders are a major source of health problems for women worldwide, with pelvic pain and vaginal bleeding being the most common emergency symptoms.<sup>1</sup> Acute pelvic pain (APP) alone accounts for 40% of gynecology emergency visits.<sup>2</sup> This nonspecific pain, lasting less than three months, can mimic many other conditions.

Gynecological emergencies fall into pregnancy-related and non-pregnancy-related categories. Pregnancy-related emergencies mainly involve complications of early pregnancy, such as abortions, ectopic pregnancies, and molar pregnancies.<sup>3</sup> Non-pregnancy-related emergencies may include bleeding ovarian cysts, adnexal torsion, acute pelvic inflammatory disease (PID), tubo-ovarian abscesses, menstrual disorders, bleeding from gynecological cancers, and vulvovaginal trauma.

While most gynecological emergencies have benign causes, adnexal pathologies are common in patients with APP.<sup>4-6</sup> In older women, these adnexal masses carry a risk of malignancy. Therefore, early detection

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and proper management of these acute conditions are essential to reduce both illness and potential mortality.<sup>7</sup>

Acute gynecological emergencies make up a significant portion (11-14%) of emergency room visits. Because these conditions can resemble other medical issues, delays in diagnosis and treatment are common, putting the woman's life, reproductive health, and overall well-being at risk.<sup>8-10</sup>

This study investigates the frequency of surgical emergencies managed by the gynecology and obstetrics department at our hospital. Timely intervention is crucial for these emergencies, as delays in diagnosis and treatment can significantly impact patient outcomes. Conversely, prompt and accurate diagnosis allows for swift treatment, improving overall healthcare results.

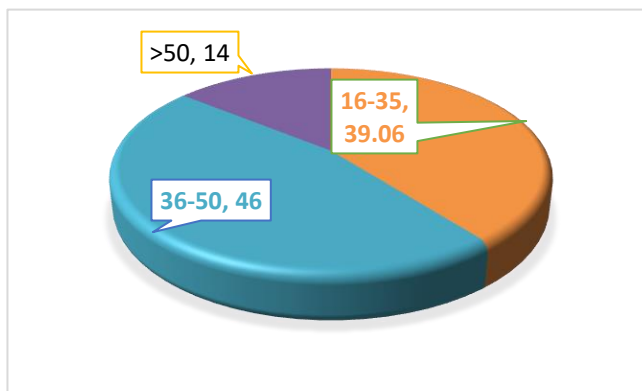
### Methodology

This retrospective analytical study was conducted from September 2022 to March 2023 at the Department of Obstetrics and Gynaecology in Fauji Foundation Hospital, Rawalpindi. The study received approval from the institutional review board. Patients were carefully selected and enrolled in the study, which included all women admitted to our center for various emergency gynecological conditions such as acute pelvic inflammatory disease (PID), acute abnormal uterine bleeding (AUB), adnexal torsion, post-coital tear, para-ovarian cyst torsion, ovarian cyst rupture, severe dysmenorrhea, gestational trophoblastic neoplasia (GTN) with breathlessness, and pyometra with uterine rupture. Exclusion criteria were patients with missing or incomplete medical records and non-gynecological emergencies (e.g., appendicitis, trauma).

### Results

This retrospective study reviewed the medical records of all admitted patients. We collected detailed gynecological histories, including information on age, pain onset, duration, and location, and menstrual history. A total of 64 patients were included in the study. The majority (68%) were married and lived in an urban area. 39.06% (n=25) patients were in the age group of 16-35, 47.0% (n=23) in 36-50 years and the remaining 14% (n=16) in an age group more than 50 years. The results are mentioned in figure 1.

Most patients (50.0%) were multiparous, 30.0% were primiparous and the rest of the 20.0% were Nulliparous. The results are shown in table I.

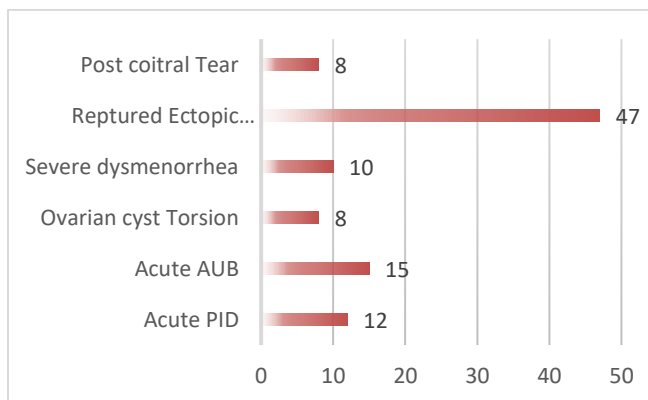


**Figure 1. Age wise distribution of the study participants.**

**Table I: Parity status of the study participants.**

Parity	%	Number
Multiparous	50.0	33
Primiparous	30.0	19
Nulliparous	20.0	12
<b>Total</b>	<b>100</b>	<b>64</b>

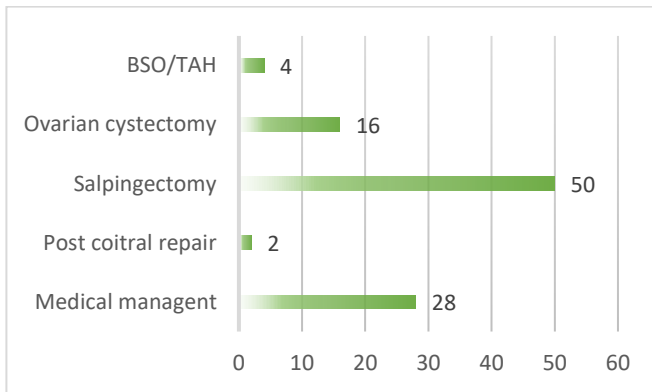
Ruptured ectopic pregnancy was the most common diagnosis (47.0%). Other diagnoses included: acute pelvic inflammatory disease (PID) (12.0%), ovarian cyst torsion (8.0%), acute abnormal uterine bleeding (15%), post-coital tear and dermoid cyst (each 8%). The results are shown in figure 2.



**Figure 2. Diagnosed causative etiology.**

Out of all gynaecological emergency cases, medical management was given to (28.0%) of all study subjects. Few patients also underwent total abdominal hysterectomy (TAH) with or without bilateral salpingo-oophorectomy (BSO). Ovarian cystectomy and post-coital repair were performed in few cases. The results are shown in figure 3.

In this study, the majority (unspecified percentage) came from the surgery department, often for conditions initially misdiagnosed as: Small intestinal obstruction, Appendicitis and Cholecystitis.



**Figure 3. Treatment approaches among study participants.**

The patients referred from the medicine department for various conditions, including: Acute pancreatitis, Cystitis, Gastroenteritis and Pyelonephritis. The results are shown in table II.

**Table II: Misdiagnosis at initial presentation.**

Referral from	Initial diagnosis
<b>Medicine</b>	Acute gastroenteritis, Acute pancreatitis, Pneumoperitoneum, Hepatitis Ureteric calculi, Acute pyelonephritis, Acute cystitis
<b>Surgery</b>	Acute cholecystitis with cholelithiasis, Small bowel obstruction, Peritonitis, Diverticulitis

On average, it took 8.2 hours (with a standard deviation of 2.4 hours) for patients with acute gynecological conditions to receive an accurate diagnosis after experiencing symptoms and being admitted to the gynecology department.

## Discussion

Gynecological emergencies are serious conditions affecting the female reproductive system that can threaten a woman's life, sexual health, and future fertility. These emergencies often cause sudden severe abdominal pain, abnormal vaginal bleeding, or both. Common causes include complications during early pregnancy, pelvic inflammatory disease (PID), and problems with contraception.<sup>9</sup> Certain hospitals, primarily in developed countries, have established specialized Emergency Gynaecology Units (EGUs) to expedite intervention for acute gynecological issues. These units cater to conditions like severe pelvic pain, heavy menstrual bleeding (menorrhagia), vulvar complaints, acute pelvic inflammatory disease (PID), severe nausea and vomiting in early pregnancy (hyperemesis gravidarum), and complications following gynecological surgery.<sup>10</sup>

EGUs typically comprise specialized nurses, sonographers, and an on-call team of gynecologists led by a consultant. Their primary aim is to provide prompt, high-quality care, thereby minimizing potential complications and ultimately reducing illness and death associated with such emergencies.

In cases of acute abdominal pain, distinguishing between various potential causes, including life-threatening conditions and gynecological versus non-gynecological origins, is crucial. Prompt action is essential to ensure patient safety and optimal outcomes, especially when life-threatening gynecological emergencies are suspected. Our study focused on a smaller group (64 patients) who underwent surgery for gynecological emergencies. This differs from Barat et al. conducted interviewed 118 pregnant women using a questionnaire to understand their experiences with acute emergencies.<sup>3</sup> In our study among the total participants, 39 (19.2%) patients were referred from other broad specialties. Our study participants, similar to those in Acharya et al<sup>2</sup> research, primarily fell within the 16-35-year age range. Ectopic pregnancy emerged as the most frequent gynecological emergency in our study, accounting for 43.3% of cases. This finding aligns with prior research, including studies by Ibrahim NA et al. and Awori MN et al, which similarly identified ectopic pregnancy as the most prevalent cause.<sup>4,5</sup>

Our study reflects current trends in ectopic pregnancy management. Nearly 40% of patients underwent salpingectomy (fallopian tube removal), followed by 30% receiving medical management. These findings are consistent with recent research, including a study by Jindari et al<sup>8</sup> which reported similar treatment distribution (47.8% salpingectomy, 37% total abdominal hysterectomy).

A significant finding of our study was the average delay of 8.2 hours (with a standard deviation of 2 hours) between when symptoms began and patients were admitted to the gynecology department. This delay could have been critical, potentially allowing for medical management instead of surgery. Early intervention can significantly reduce complications and mortality rates.<sup>9-11</sup>

Numerous studies have documented the importance of a comprehensive medical history, physical examination, ultrasound scans, and laboratory tests in diagnosing acute gynecological emergencies.<sup>12-16</sup>

## Conclusion

Acute gynecological emergencies are a significant cause of illness and even death for women. Our study aligns with past research, identifying ruptured ectopic pregnancy as the most frequent and life-threatening emergency. Early diagnosis and swift referrals to specialists can significantly improve women's sexual health, fertility, and overall well-being. These outcomes highlight the critical role of early ectopic pregnancy detection. Routine pregnancy testing alongside blood tests and, in certain cases, inflammatory marker measurements (ESR and CRP) can be crucial for women of reproductive age. Large-scale prospective studies are needed to raise awareness about acute lower abdominal pain and the importance of readily available gynecological care for managing these emergencies.

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