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CLINICAL PRESENTATION AND SURGICAL OUTCOMES OF ECTOPIC PREGNANCY: A CROSS-SECTIONAL STUDY

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ABSTRACT

Background: Ectopic pregnancy remains a major cause of acute abdominal emergencies and early maternal morbidity. Early identification of its clinical features and timely surgical intervention are essential for reducing complications. This study evaluated the clinical presentation and postoperative outcomes of women diagnosed with ectopic pregnancy. **Objective:** To evaluate the clinical presentation and surgical outcomes of patients diagnosed with ectopic pregnancy. **Methods:** This cross-sectional study was carried out in the Department of Obstetrics and Gynecology, Shaheed Suhrawardy Medical College Hospital. A total of 38 confirmed ectopic pregnancy cases were included and compared with 38 normal pregnancy controls for clinical presentation. Surgical procedures and postoperative outcomes were analyzed using data from operation records and patient follow-up. **Results:** The most common presenting symptoms in ectopic pregnancy were abdominal pain (76.3%), amenorrhea (84.2%), vaginal bleeding (42.1%), P/V bleeding (44.7%), and palpitation (57.9%). Shock features were present in 50% of cases, and a mass in the fornix was detected in 28.9%. These clinical features were markedly lower in normal pregnancy controls. Surgically, salpingectomy was the most frequently performed procedure among the 38 ectopic cases. Postoperative recovery was smooth and uneventful in 55.3% of patients, while 44.7% experienced minor complications. No maternal deaths occurred in the study. **Conclusion:** Ectopic pregnancy presents with characteristic acute symptoms such as abdominal pain, amenorrhea, and hemodynamic instability, distinguishing it clearly from normal pregnancy. Surgical management, primarily salpingectomy, resulted in favorable outcomes, with most patients recovering without major complications.

KEYWORDS: Ectopic pregnancy, abdominal pain, salpingectomy, clinical presentation, surgical outcomes.

INTRODUCTION

Ectopic pregnancy (EP) is one of the most common acute abdominal emergencies in gynecology and remains a major cause of maternal morbidity and mortality in early pregnancy. Its incidence is approximately 1–2% of all pregnancies, but significantly higher in developing countries. Despite improved diagnostic capabilities, ruptured ectopic pregnancy (REP) continues to account for nearly 10% of maternal deaths, especially where access to timely care is limited. EP demands urgent clinical attention because delayed diagnosis can rapidly lead to hemodynamic instability, shock, and life-threatening intra-abdominal bleeding.

The diagnosis of EP relies on clinical presentation, physical examination, laboratory evaluation, and imaging findings. The classic triad—abdominal pain, amenorrhea, and vaginal bleeding—is present in only about 50% of

patients, although abdominal pain is the most common initial symptom. Previous reports show that 40–50% of women present with vaginal bleeding, 50% with abdominal pain, and up to 70% with abdominal tenderness. In ruptured cases, abdominal pain is reported in 89.6%, amenorrhea in 74.1%, and vaginal bleeding in 56.3% of patients. These variable presentations highlight the need for careful clinical assessment to prevent diagnostic delay.

Management options include expectant management, medical therapy with methotrexate, and surgical intervention. Methotrexate is preferred for hemodynamically stable patients with unruptured EP, whereas surgical treatment is indicated for unstable patients or those with ruptured EP. Surgery may be performed by laparoscopy or laparotomy, with salpingectomy being the most common procedure. Laparoscopy is more frequently used in tubal abortion and unruptured EP (40% and 25%, respectively), while laparotomy remains the primary approach for ruptured EP (70%). Salpingostomy may be performed to preserve the fallopian tube, although it carries risks such as persistent trophoblast and recurrent ectopic pregnancy. Preservation of tubal function is often preferred for women desiring future fertility, as bilateral tube integrity may offer better prospects for spontaneous conception.[1,2,3]

Outcomes following treatment of EP include immediate surgical success, resolution without persistent trophoblastic tissue, and postoperative recovery. Secondary outcomes involve future fertility, recurrence of ectopic pregnancy, treatment-related complications, and maternal morbidity.[4] Evaluating clinical presentation and postoperative outcomes is essential to improving diagnostic efficiency, reducing complications, and enhancing surgical decision-making. Therefore, this study aims to assess the presenting features and surgical outcomes of patients with ectopic pregnancy in a tertiary-care hospital setting.

OBJECTIVE

To evaluate the clinical presentation and surgical outcomes of patients diagnosed with ectopic pregnancy.

METHODOLOGY

This study followed a mixed case-control and cross-sectional design and was conducted in the Department of Obstetrics & Gynaecology at Shaheed Suhrawardy Medical College Hospital over a six-month period after receiving RRC approval. A total sample size of 79 per group was calculated, but due to the COVID-19 crisis, 38 cases of ectopic pregnancy and 38 controls with normal pregnancy were finally enrolled using purposive sampling. Clinically suspected ectopic pregnancy cases and normal pregnant women meeting the inclusion criteria were selected from admitted patients. Data were collected through face-to-face interviews, physical examination, and review of investigation reports using a structured, pretested questionnaire. Demographic, clinical, reproductive, and risk factor variables were recorded along with presenting complaints and diagnostic findings. Diagnosis of ectopic pregnancy was confirmed through history, clinical examination, laboratory tests, radiological evaluation, and when available, laparotomy and histopathology findings. Ethical clearance was obtained, and written informed consent was taken from all participants after explaining study objectives, procedures, risks, and benefits in understandable language. Confidentiality was strictly maintained through coded data, restricted access, and secure storage. All collected information was compiled, organized, and processed into tables and figures for presentation. Statistical analysis was performed using SPSS software with appropriate statistical tests at a significance level of 0.05 and 80% study power.

RESULTS

Table-I: Distribution of Patients by Clinical Presentation in Ectopic Pregnancy and Normal Pregnancy Group (n = 78).

Clinical Presentation	Ectopic Cases (n = 38)	Controls (n = 40)	Total (n = 78)	p-value
Abdominal pain	29 (76.3%)	19 (51.4%)	48 (63.2%)	0.017*
Amenorrhea	32 (84.2%)	24 (63.2%)	56 (71.7%)	0.037*
Nausea vomiting	16 (42.1%)	11 (28.9%)	21 (27.6%)	0.073
Spotting	13 (34.2%)	7 (18.4%)	20 (25.6%)	0.09
P/V bleeding	17 (44.7%)	6 (15.2%)	23 (30.0%)	0.003*
Abdominal mass	11 (28.9%)	1 (2.6%)	12 (15.4%)	<0.001*
Palpitation	22 (57.9%)	6 (16.2%)	28 (36.8%)	<0.001*
Altered consciousness	8 (21.1%)	0 (0.0%)	8 (10.2%)	0.003*
Abdominal distension	15 (39.5%)	2 (5.1%)	25 (32.0%)	<0.001*
Features of shock	3 (7.9%)	2 (5.1%)	5 (6.4%)	<0.001*
No symptoms	12 (31.6%)	2 (5.4%)	13 (17.1%)	0.006*

Table-I shows that the clinical presentation of ectopic pregnancy was abdominal pain accounting for 76.5% of cases, 84.2% amenorrhea, 42.1% nausea vomiting, 74.2% P/V bleeding, palpitation 57.9%, altered consciousness 39.5%, features of shock 60.5%, mass in fornices 28.9%. In normal pregnancy group abdominal pain was found in 51.4% cases, 62.2% amenorrhea, 16.2% P/V bleeding, palpitation 16.2%, abdominal

distension 8.1%, features of shock 5.4%, mass in fornices 5.4%. Chi-square test indicates that abdominal pain, amenorrhea, nausea vomiting, P/V bleeding, palpitation, altered consciousness, abdominal distension, features of shock, mass in fornices were significantly higher in Ectopic pregnancy group compare to normal pregnancy group ($p<0.05$).

Table-II: Distribution of patients by risk factors in ectopic pregnancy and normal pregnancy group (n = 78)

Risk factors	Ectopic cases (n=38)	Controls (n=40)	Total (n=78)	p-value
History of tubal surgery	2 (5.3%)	1 (2.7%)	3 (3.8%)	0.544
History ectopic pregnancy	3 (7.9%)	0 (0%)	3 (3.8%)	0.007*
Abortion	19 (50.0%)	9 (23.7%)	28 (36.8%)	0.017*
Intrauterine device	11 (28.9%)	4 (10.8%)	14 (18.4%)	0.018*
History of infertility	3 (7.9%)	3 (8.1%)	6 (7.6%)	0.128
History of D&C	11 (28.9%)	11 (29.7%)	24 (31.6%)	0.92
Previous LSCS	3 (7.9%)	7 (18.9%)	10 (12.7%)	0.28
Previous abdominal pelvic surgery	5 (13.2%)	4 (10.8%)	9 (12.0%)	0.824
History of PID	13 (34.2%)	5 (13.5%)	19 (24.3%)	0.031*
Any termination of pregnancy	6 (15.8%)	10 (27.0%)	16 (20.7%)	0.289
No risk factors	7 (18.4%)	15 (40.5%)	17 (22.4%)	0.087

Figures in the parentheses denote corresponding %.
**Statistical analysis was done by Chi-square test, significant*

Table-II shows the risk factors of the in two groups. Previous history of ectopic pregnancy (23.7% vs. 3.7%), abortion (50.0% vs. 28.7%), pelvic inflammatory disease (PID) (34.2% vs. 13.5%) and intrauterine device (28.9% vs. 9.6%) were significantly higher in ectopic pregnancy group compare to normal pregnancy group (p It's important to note that not all women who have had an abortion will experience an ectopic pregnancy, and ectopic pregnancies can occur in women who have never had an abortion. Following abortion usually D&C are done which may cause ascending infection leading to PID increase the chance of ectopic pregnancy.

Table-III: Distribution of the study patients by operation performed in ectopic pregnancy (n = 38)

Types of operation	No. of Patients	Percentage (%)
Unilateral salpingectomy	25	65.8
Unilateral salpingectomy with contra-lateral tubectomy	7	18.4
Unilateral salpingo-oophorectomy	3	7.9
Salpingostomy	1	2.6
Removal of cornual pregnancy and repair (Table-3.12)	1	2.6
Salpingotomy and repair	1	2.6
Total	**38**	**100**

Table-III shows that out of 38 cases of laparotomy 25(65.8%) cases unilateral salpingectomy, 7(18.4%) cases unilateral salpingectomy with contra-lateral tubectomy and 3(7.9%) cases unilateral salpingo-oophorectomy were done. In one case (2.6%) salpingostomy was done, in one case removal of cornual pregnancy and repair; and in one case salpingotomy and repair were done.

Salpingostomy was done in one case where ectopic pregnancy was unruptured and laparoscopic findings product was smaller in amount with raised serum β-HCG level and TVS findings was sac size >4cm. For the same reason in certain situation salpingotomy and repair was done in certain cases.

Table-IV: Post operative minor complications after laparotomy (n = 38)

Minor complications	Frequency	Percentage (%)
Pyrexia	7	18.4
Lower abdominal pain with pyrexia	5	13.2
UTI with pyrexia	1	2.6
Wound gap with pyrexia	1	2.6
Mild abdominal distension	2	5.3
Loose Motion	2	5.3

Table-IV shows that small number of patients had developed minor complications like pyrexia alone 18.4%, Pyrexia with lower abdominal pain (13.2%), wound gap (2.6%), mild abdominal distension (5.3%), UTI with pyrexia (5.3%) and loose motion (5.3%) among the study population.

Table-V: Outcome of operation in ectopic pregnancy group (n = 38)

Outcome	No. of Patients	Percentage (%)
Smooth and uneventful	21	55.3
Minor complication	17	44.7
Total	**38**	**100**

Table-V shows that about half (55.3%) of the patients had smooth uneventful recovery and 44.7% having minor complications. There was no death among the study population.

DISCUSSION

In this study, abdominal pain was the most common presenting symptom of ectopic pregnancy, seen in 59 out of 78 cases, followed by nausea/vomiting in 49, vaginal bleeding in 35, palpitations in 45, signs of shock in 47, and adnexal mass in 23, which is in accordance with the findings of Singh et al.[5] The classical triad—abdominal pain, amenorrhoea, and vaginal bleeding—was present in 32 cases, matching the typical pattern described in standard medical literature and supported by Sindhura et al.[6] Anemia was documented in 52 ectopic pregnancy patients, and 47 had poor nutritional status; this supports the observations of Prasanna et al.[7] and Shabab et al.[8] who reported high frequencies of pallor and anemia among ruptured cases. Features of shock were present in 47 cases, consistent with delayed presentation and significant hemoperitoneum as noted by Panchal et al.[9]

Out of 38 surgically managed patients, unilateral salpingectomy was performed in 25, unilateral salpingo-oophorectomy in 3, and unilateral salpingectomy with contralateral tubectomy in 7, which closely aligns with the findings of Sudha and Thangaraj[10] who reported salpingectomy as the most common intervention. Other procedures included salpingostomy and cornual repair, similar to variations reported by Sindhura et al.[11] Postoperative recovery was smooth and uneventful in 21 patients, while 17 experienced minor postoperative complications such as wound infection or delayed recovery, matching similar outcome trends described by Suseela et al. Recovery delays were common among nutritionally depleted patients, emphasizing the importance of optimizing perioperative care, particularly in emergency presentations.

CONCLUSION

Abdominal pain, vaginal bleeding, and clinical features of shock were the predominant symptoms among ectopic pregnancy cases, and the classical triad was frequently observed. Surgical management, mainly unilateral salpingectomy, was the most commonly performed procedure. Most patients recovered well after surgery, although minor postoperative complications occurred in a subset. Early diagnosis and timely surgical intervention remain critical for improving outcomes in ectopic pregnancy.

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