

Observational Study, Risk Factors, Clinical Demonstration and Management of Ectopic Pregnancy in a Rural Tertiary Care Centre

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Abstract

Ectopic pregnancy is a serious hazard to a woman's health and requires prompt attention and early aggressive intervention. These complications are not only fatal loss but also causes significant maternal morbidity and mortality. Minimal invasive surgery is considered to be safest effective surgical solution for tubal ruptured ectopic pregnancy to reduce intra operative blood loss, analgesic requirements and hospital stay. Clinical retrospective study was conducted in the period of three years (January 2018 to December 2020) in the department of obstetrics and Gynaecology at PIMS Hospital Islamabad Pakistan. A total of 90 confirmed case of ruptured tubal ectopic pregnancies were divided into 2 groups, laparoscopy (n=68) and laparotomy (n=22). The main outcome measures the demographic features like age, gravida, parity, previous spontaneous loss, previous MTP, Hb at admission, period of gestation, total blood loss and haemoperitoneum and postoperative parameters blood loss, blood requirement and duration of hospital stay. No significant differences observed in age, gravida, parity, previous history of spontaneous loss and previous MTP in both laparoscopy and laparotomy procedure. Common demographic features were age (30 to 32 years), gravida (2-3) and parity (1). Patients with heavy blood loss >1000ml and massive hemoperitoneum were also undergone for laparoscopic procedure. Hospital stay and PRBC blood transfusion were less in patient undergone laparoscopic surgery. Laparoscopy is considered to be advantageous over laparotomy in terms of shorter hospital stay and speedy recovery and even in massive haemoperitoneum

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Introduction

Ectopic pregnancy is defined as the implantation of a fertilized egg outside the uterine cavity. The most common ectopic site of implantation (97%) is the fallopian tube. The remaining 3% of ectopic pregnancies are implanted in the cervix, ovary, peritoneal cavity, or uterine scars. Ectopic pregnancy should be suspected in any woman with child bearing age presenting to the clinic or casualty with symptoms such as amenorrhea, abdominal pain and vaginal bleeding.[1] Tubal pathology, endometriosis, ovulation induction and ART are the probable reasons for association of infertility with occurrence of ectopic pregnancy. Although, overall incidence of ectopic pregnancy has increased over the past few years, due to increase in STD rates, cesarean rates and increasing ART pregnancies. Death due to ectopic pregnancy has declined.[2,3] Women who are subfertile are also at increased risk for an ectopic pregnancy because altered tubal integrity (or function) contributes to both condition.[4] However, half of all women who receive a diagnosis of an ectopic pregnancy do not have any known risk factors.[5] Treatment modality for ectopic pregnancy depends on site of pregnancy, ruptured or unruptured pregnancy, availability of laparoscopy, surgical expertise, need to retain fertility and choice of patient. Present study was aimed to study risk factors, clinical presentation and management of ectopic pregnancy in a rural tertiary care center.

Materials And Methods

The Present study was conducted in the period of three years (January 2018 to December 2020) in the department of obstetrics and Gynaecology at PIMS Hospital Islamabad Pakistan. The Current study has been approved by the ethical committee of the institute. Patients of clinical features of ectopic pregnancy, diagnosis were confirmed after investigations or during surgery, patient willing to participate in present study. Data was collected and compiled using Microsoft Excel, analyzed using SPSS 23.0 version. Statistical analysis was done using descriptive statistics.

Results

During study period 90 cases of ectopic pregnancy were managed at our hospital. Mean age of patients was 26.87 ± 4.81 years & majority was from 26 -30 years age group (47.69 %).

Table 1 Show Age Distribution

Age groups (in years)	No. of patients	Percentage
19-25	27	27.69%
26-30	42	47.69%
31-35	13	13.85%
36-40	7	9.23%
>40	1	1.54%
Mean age (mean \pm SD)	26.87 ± 4.81 years	

Common symptoms noted were abdominal pain (92.31 %), amenorrhea (78.46 %), vaginal bleeding (55.38 %) & triad of symptoms (47.69 %), Common signs were abdominal tenderness (75.38 %), adnexal tenderness (64.62 %), cervical motion tenderness (69.23 %), pallor (81.54 %) & shock (at admission) (27.69 %). Hemoperitoneum was noted among 87.69 % cases.

Table 2 Show Clinical Presentation

Presentation	Number of cases	%
Abdominal pain	85	92.31%
Amenorrhoea	64	78.46%
Vaginal bleeding	42	55.38%
Triad of symptoms	38	47.69%
Abdominal tenderness	82	75.38%
Adnexal tenderness	57	64.62%
Cervical motion tenderness	59	69.23%
Pallor	67	81.54%
Shock (at admission)	24	27.69%
Hemoperitoneum	69	87.69%

No risk factors were noted in majority of cases (52.31 %). Common risk factors observed were history of pelvic surgery (33.85 %), caesarean section with/without tubectomy (21.54 %), previous abortion (21.54 %), History of PID (20 %), tubectomy (16.92 %), history of infertility (9.23 %), previous ectopic pregnancy (3.08 %), recanalization (1.54 %) & IUCD use (1.54 %).

Table 3: Risk factors

Presentation	Number of cases	%
Abdominal pain	85	92.31%
Amenorrhoea	64	78.46%
Vaginal bleeding	42	55.38%
Triad of symptoms	38	47.69%
Abdominal tenderness	82	75.38%
Adnexal tenderness	57	64.62%
Cervical motion tenderness	59	69.23%
Pallor	67	81.54%
Shock (at admission)	24	27.69%
Hemoperitoneum	69	87.69%

Only 6 cases received medical management (8.17 %) as compared to surgical management (91.85 %). Laparotomy (74.31 %) was done among majority as compared to laparoscopy (23.54 %). Common surgical procedures were salpingectomy (86.62 %), salpingostomy (1.57 %), oophorectomy / cystectomy (11.77 %), cornual resection (1.54 %), excision of caesarean scar pregnancy (2.54 %).

Table 4: Management modalities

Modalities	Number of cases (n = 53)	%
Medical management	4	8.17%
Surgical management	81	91.85%
Laparotomy	57	73.31%
Laparoscopy	26	23.54%
Salpingectomy	67	86.62%
Salpingostomy	1	1.54%
Oophorectomy / Cystectomy	13	11.77%
Cornual resection	3	2.54%
Excision of caesarean scar pregnancy	2	2.54%

Blood transfusion was required in 75.38 % cases, while post-operative febrile illness was observed in 16.92 % cases. Wound infection was observed in 3.08 % cases. No mortality observed.

Morbidity	Number of cases (n = 53)	%
Blood transfusion	61	75.38%
Febrile illness	23	16.92%
Wound infection	3	3.08%

Discussion

The clinical presentation of ectopic pregnancy has changed from life threatening disease requiring emergency surgery to a benign condition and in asymptomatic women nonsurgical treatment options are available now. Although women with ectopic pregnancy frequently have no identifiable risk factors, a prospective case-controlled study has shown that increased awareness of ectopic pregnancy and a knowledge of the associated risk factors helps identify women at higher risk in order to facilitate early and more accurate diagnosis.[6] Clinical manifestations are diverse. The classic triad of signs and symptoms of Ectopic pregnancy (present in less than 50% of patients) includes history of a missed menstrual period followed by abnormal vaginal bleeding, abdominal or pelvic pain, and a tender adnexal mass.[7] With the recent advances in early diagnostic techniques; with high resolution transvaginal ultrasonography, endoscopy, rapid and accurate serum human chorionic gonadotropin (hCG) detection, conservative surgical and non-surgical treatment of unruptured ectopic pregnancy is possible.[8] Conservative management in the form of expectant and medical management should be considered as a first-line treatment modality, provided that the overall clinical picture suggests that it is safe to do so. If not, laparoscopic management of EPs appears to be the favored approach of management as compared to laparotomy.[9] The chance of intrauterine pregnancy in subsequent pregnancies is 40% after salpingectomy, 60% after conservative tubal surgery, 87% after medical treatment. The recurrent ectopic pregnancy rates after radical and conservative management are similar 10% - 20%.[10,11] Das A et al,[12-13] noted that incidence of ectopic pregnancy was 0.95% of total births, peak age group of incidence was age of 26-30 years. Use of

contraception and history of abortion were the main risk factors with contributions of 27.82% each respectively. Abdominal pain (86.95%), amenorrhea (81.73%), vaginal bleeding (54.78%) were the most frequent presenting complaints. Ampulla (58.26%) followed by cornua (8.69%) were the commonest sites of ectopic implantation. Ovarian pregnancies contributed to only 5.21%. A total of 69.56% patients presented with ruptured ectopic pregnancy but only 14.78% had hemodynamic instability. In majority of patients salpingectomy (61.73%) was done followed by salpingo-oophorectomy (8.69%). Only 11.30% received methotrexate in line of medical management and 59.13% required blood transfusion. Avoiding unnecessary pregnancies, safe sex practices, using barrier contraceptives, prompt treatment of PID/STDs can bring down the incidence of ectopic pregnancies. Early diagnosis, timely referral, aggressive management, improvement of blood bank facilities can reduce the maternal morbidity and mortality associated with ectopic pregnancy.

Conclusion

Diagnosis of ectopic pregnancy needs high index of clinical suspicion irrespective of the presence or absence of classical clinical trial of amenorrhea, abdominal pain and bleeding per vagina, sterilization status. Early diagnosis and management in form of medical treatment or conservative surgery not only reduces maternal morbidity and mortality but also preserves future fertility.

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