

ANALYTIC STUDY OF AETIOLOGY, RISK FACTORS, CLINICAL FEATURES, DIAGNOSIS AND MANAGEMENT OF ECTOPIC PREGNANCY IN A TERTIARY CARE HOSPITAL

CH. Madhuri¹, N. Chandrababha², Lakshmi Kiran³, R.Sujatha⁴, Swarna Kumari⁵

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Corresponding Author:

Dr. R. Sujatha,

Email: drsujathareddy@rediffmail.com

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¹Associate Professor, Rangaraya Medical College, Kakinada, India.

²Associate Professor, Government Medical College, Vizianagaram, India.

³Assistant Professor, Rangaraya Medical College, Kakinada, India.

⁴Associate Professor, Rangaraya Medical College, Kakinada, India.

⁵Postgraduate, Rangaraya Medical College, Kakinada, India.

Abstract

Background: To study and analyse the clinical presentation, risk factors, outcome immediate morbidity and mortality associated with ectopic pregnancy Methodology. **Materials & Methods:** Prospective observational study conducted in department of obstetrics and gynaecology Government General Hospital Kakinada during a period of August 2022 to July 2023. Inclusion Criteria: All diagnosed cases of ectopic pregnancy admitted to GGH Kakinada during May 2021 to October 2022, Exclusion Criteria: All cases of intrauterine pregnancy. After taking detailed history of the patient general examination for following points were noted 1) Condition of patient - anaemia, presence of shock, restlessness, cold and clammy extremities. 2) Pulse, respiration, blood pressure and temperature cardiovascular and respiratory systems were also examined. Abdominal examination for Guarding, rigidity, tenderness, presence of mass, signs of free fluid in peritoneal cavity, presence of rare signs like Cullen's sign. Vaginal examination for nature of bleeding Colour of the cervix, cervical tenderness cervical position uterine size mobility and consistency presence of mass in the fornix Per-rectal examination to confirm findings whenever necessary. The investigations of blood for Hb%, Blood grouping and Rh typing Urine pregnancy test serum B hCG levels, complete blood counts and Ultrasonography Management depending upon the condition of the patient the treatment given by expectant management or medical or surgical management. Postoperative stay for seven days and suture removal done and discharged the patients with follow up instructions. **Results** Out of 100 large number of patients are between the age group 21 to 30 years. Most of them having no risk factor and 30% patients have had tubectomy. Many of them presented with pain abdomen and symptoms of shock. Nearly 90% patients required emergency laparotomy Only 10 patients were suitable for medical management out of which 8 patients were operated for failure of medical management. Only 2 patients responded to medical treatment. **Conclusion:** The incidence of ectopic pregnancy is increased. But because of ignorance and unawareness patients are not consulting gynaecologists immediately after the missing period.

INTRODUCTION

One of the most frequent abdominal catastrophe a gynaecologist encounters in daily practice is ectopic pregnancy. The term refers to any intrauterine or extrauterine pregnancy in which the fertilized ovum develops implants at an unsuitable location that hinders growth and development. A fertilized ovum is implanted in Fallopian tube, (Interstitial portion Isthmus Ampulla Infundibulum ovary Angular

pregnancy, rudimentary uterine horn (Cornual pregnancy), Abdomen, Cervix. Due to the effectiveness of modern antibiotic therapies for pelvic inflammatory disease and the rising incidence of sexually transmitted illnesses, the ratio of extrauterine to intrauterine pregnancies has grown.^[1,2]

Tubal pregnancy: Fertilization of ovum occurs in the ampulla of uterine tube. Conditions that slow the passage of fertilized egg: Factors like salpingitis, tumors, pelvic adhesions, "spasm," congenital

abnormalities, and previous tube surgeries can impede the movement of the fertilized egg. Conditions that affect tubal passage: 1. Congenital anomalies like diverticula, supplementary ostia, tube atresia, and tumors can obstruct the fallopian tube.^[2] Psychological factors: "Spasm" and tubal dyskinesia may be caused by autonomic nerve control and hormonal imbalances, affecting the transport of the fertilized egg.^[3] Surgical obstruction: Previous tube surgeries, tubal ligation, and partial resection can lead to ectopic pregnancy development.^[4] IUDs (intrauterine devices): IUD use can increase the risk of ectopic pregnancy.^[5] Hormonal birth control: Changes in hormone levels can affect tubal motility, and progestin use has been associated with a higher risk of ectopic pregnancy.^[6] Artificial reproductive methods: Assisted reproduction techniques can contribute to ectopic pregnancies, often due to tubal factors.^[7] Exposure to diethylstilbestrol (DES): Prenatal exposure to DES increases the risk of ectopic pregnancy.^[8] Other factors: Peritubal adhesions, uterine infections, endometriosis, previous induced abortion, previous cesarean delivery, cigarette smoking, luteal phase abnormalities, and vaginal douching can also increase the risk of ectopic pregnancy. Termination of tubal pregnancy: tubal abortion, implantation in ampulla or infundibulum can result in.^[1] Complete resorption, complete abortion, incomplete abortion, or missed abortion.^[2] Tubal rupture: Rupture typically occurs in the isthmus or interstitial region of the tube, leading to pelvic haematocele.^[3] Viable tubal pregnancy: Some unruptured viable pregnancies can be removed without harm.^[4] Intrauterine extrusion: Ectopic pregnancy can lead to rupture, abortion, or term pregnancy.^[5] Chronic ectopic: Tubal rupture that occurs at a later stage, requiring laparotomy and ligation.^[6] Interstitial pregnancy: A rare form of ectopic pregnancy can cause fatal complications. Implantation sites and termination modes: Isthmial implantation: Implantation in the isthmus can result in perforation or rupture of the tubes. Implantation in the ampulla or infundibulum: The most common occurrence, often resulting in tubal mole, tubal abortion, or tubal perforation. Pregnancy continuing to later stages or term: highly unusual and rare. Clinical diagnosis of ectopic pregnancy.^[1] Common symptoms: Amenorrhea (usually 6 to 8 weeks), abdominal pain, and bleeding or spotting. Other symptoms may include syncope, rectal symptoms, vomiting, backaches, and increased body temperature.^[2] Physical examination findings: Fever is rare but may occur. Blood pressure and pulse may be normal or slightly hypotensive, with tachycardia as a sign of low blood volume. Abdominal examination may reveal distension, tenderness, and rebound tenderness. Vaginal examination may detect arterial pulsations and pelvic mass.^[3] Uterine changes: The uterus may expand and pass decidual casts in some cases.^[4] Rare clinical indicators:

Cullen's sign (bluish staining around the umbilicus) and perioral halo sign.

Differential diagnosis

Ectopic pregnancy should be differentiated from other conditions like abortion, pelvic tumors, retroverted gravid uterus, salpingitis, dysmenorrhea, ovarian cysts, appendicitis, and others.

Diagnostic aids: Urine pregnancy test, serum beta HCG levels, culdocentesis (to identify hemoperitoneum), curettage (to examine decidual tissue), and ultrasonography (vaginal sonography and Doppler ultrasound). Gold standard for diagnosis: Laparoscopy is the most reliable method for identifying ectopic pregnancy.

Management

Expectant Management is suitable for cases where the HCG levels are below the discriminating zone, and specific criteria are met, including reducing serial levels of HCG, only tubal pregnancies, absence of intraabdominal hemorrhage or rupture, and a maximum ectopic mass diameter of 3.5 cm. If the initial HCG level is less than 1000mIU/ml, there is a higher chance of resolution without treatment. Expectant management should be considered for properly selected and counselled women to avoid the risks and costs associated with surgery.

Medical Management: Medical treatment offers advantages such as reduced costs and morbidity compared to surgery, with good future reproductive success rates. Methotrexate is the commonly used drug for first-line medical therapy for ectopic pregnancy. It has proven to be as successful as surgery in treating ectopic pregnancies. However, medical therapy may fail in at least 50% of cases, particularly for pregnancies past six weeks or with an ectopic mass diameter exceeding 4 cm. Immediate surgery may be required if there is a risk of tubal rupture (5-10% chance).

Indications

1. Hemodynamically stable with no signs of abdominal bleeding.
2. Commitment to necessary aftercare.
3. No limitations for methotrexate use.
4. Absence of embryonic cardiac activity
5. Gestational sac diameter <3-4 cm
6. Less than six-week gestation.
7. Serum hCG levels <5000mIU/ml

Contraindications: Hemodynamic instability., Breast feeding., Immune deficiency states, Substance abuse or signs of chronic liver disease, Renal diseases., Hematological deviations (anemia, leukopenia, thrombocytopenia)., History of methotrexate sensitivity, Active pulmonary disease, Stomach ulcer.

Regimens

Single-dose regimen: Single intramuscular dose of methotrexate (50mg/m²), followed by beta hCG measurement on day 4 and day 7. If there is a decrease in beta hCG of more than 15%, the medical management is successful. Beta hCG should be measured weekly until it reaches a non-pregnant value. If there is less than a 15% decrease, a repeat

dose of methotrexate and beta hCG measurement after 3 days are considered. Surgical management may be necessary if there is no decrease in beta hCG after two doses. Multiple-dose regimen: Methotrexate (1mg/kg) is administered on day 1, 3, 5, and 7, along with folinic acid rescue (0.1mg/kg) on day 2, 4, 6, and 8. Beta hCG should be measured on methotrexate dose days until it decreases by more than 15% from its previous value. If there is a greater than 15% decrease, methotrexate is discontinued, and beta hCG is measured weekly until it reaches a non-pregnant value. Surgical management is considered if there is no decrease after four doses of methotrexate. Side Effects: these may include pneumonitis, nausea, vomiting, stomatitis, reversible alopecia, liver toxicity, and bone marrow depression
Surgical management: Conservative Surgical approach is used in young patients who desire future intrauterine pregnancies. It aims to preserve the affected fallopian tube and is suitable for weakly ruptured, leaky, or unruptured ectopic pregnancies. Even with a major rupture, it is possible to save most of the tube. Laparotomy is often required for mostly ectopic pregnancies.

Surgical management

Two main methods used in conservative surgery are salpingostomy and salpingotomy. Salpingostomy involves squeezing the tube to remove pregnancy products, while salpingotomy involves making a longitudinal incision over the implantation site, typically in the ampulla. Salpingotomy is closed with sutures, usually 7-0 Vicryl. Salpingectomy with ipsilateral oophorectomy is an option in some cases. Segmental Resection and Anastomosis is occasionally used for unruptured isthmic pregnancies. It involves removing the mass and joining the segments of the tube together using sutures, preferably with magnification. It can be an alternative to salpingostomy, which may cause scarring and narrowing of the tube's lumen. Hysterectomy: This procedure may be performed in women over the age of 40 when a tubal pregnancy is caused by uterine illness or extensive pelvic adhesions. Rh Negative Women: Immunoglobulin administration is necessary in Rh-negative women to prevent isoimmunization Autotransfusion: In cases of significant blood loss during emergencies, autotransfusion, which involves reinfusing blood collected from the abdomen, may be performed.

Angular Pregnancy

Angular pregnancy refers to the placement of the ovum at the uterine angle or corner, specifically in the uterotubal section adjacent to the tubal opening. It is important to differentiate between angular pregnancy and interstitial pregnancy, where the fertilized ovum grows within the uterine wall. Angular pregnancy involves growth towards the uterine cavity.

Cornual pregnancy :(Pregnancy in a rudimentary uterine horn): Cornual pregnancy, is a rare type of pregnancy where the fertilized ovum implants in a horn separate from the uterus. Spermatozoa are believed to travel through the other horn and tube to

reach the cavity and then penetrate the primitive horn for fertilization. This type of pregnancy can have a varied course and often results in rupture resembling ectopic pregnancy.

Ovarian Pregnancy

Ovarian pregnancy is the most common non-tubal type of ectopic pregnancy. It occurs in approximately 1 in 40,000 to 1 in 7,000 deliveries. Diagnostic criteria for ovarian pregnancy include an intact tube on the affected side, the presence of the fetal sac in the location where the ovary would normally be, connection to the uterus through the ovarian ligament, and identifiable ovarian tissue in the ovary's wall. Fertilization in occurs when the ovum encounters difficulties in leaving the follicle and is then implanted either on the ovary or near the ruptured follicle. Barden and Hein's (1952) analysis states of those, 75% terminate in the first trimester, 12.5% in the 2nd trimester, 12.5% in the 3rd trimester The literature has documented instances of ovarian pregnancies that have gone to term, which is typically surgically treated as a second pregnancy in the abdomen.

Classification

Barden and Hein's (1952)

1. Primary ovarian pregnancy
 - a. Intrafollicular
 - b. Extrafollicular : these are again Juxta follicular, Interstitial, Cortical, Superficial implantation
2. Combined ovarian pregnancy

Abdominal pregnancy is the most dangerous and rarest type of extrauterine pregnancy. A main abdominal pregnancy was definitively demonstrated by Studdiford (1942), which satisfies the following requirements

1. Ovaries and tubes that are healthy and show no signs of recent or distant damage.
2. The uteroplacental fistula was absent.
3. The presence of a purely peritoneal surface-related pregnancy that is young enough to rule out the potential of secondary implantation after primary nidation in the tube.

In 4 cases, according to King (1932), the fertilised ovum managed to exit through a primary abdominal pregnancy implanted because to a uterine wall defect. By Thomas and his co workers, cases have been reported³. Centers for Disease Control According to estimates, one in 10,000 living births⁴ experience abdominal pregnancy.

Treatment

The risk of complications is reduced if surgery done immediately. When abdominal pregnancy is diagnosed after the sixth or seventh month while the foetus is still alive, the time of operation is debatable. The majority of authors believe that laparotomy should be carried out immediately (Jeffcoate, Eastman, Curtis).

Cervical Pregnancies

The first cervical pregnancy case was published in Keilmen in 1897. Rubin developed his cervical pregnancy diagnosis criteria in 1911.¹ The cervical region must have glands on the side of the placenta.
2. The placenta must be located in full or in part, either below the entrance of the peritoneal reflection

of the anterior and posterior or beneath the uterine vessels uterine surface areas.³ The corpus uteri must be free of foetal components. Five additional clinically useful criteria for the diagnosis of cervical pregnancy were proposed by Paalman and Mcelin. 1. Uterine bleeding without discomfort after an amenorrhic phase.² A soft, enlarging cervix that is at least as big as the fundus (the hourglass uterus)³. Conceptional products completely contained within and securely fastened to the endocervix ⁴. A cervical internal closed os ⁵. External cervical os that is partially open

Incidence: 1:16-18,000 (Dees 1966). Due in part to assisted reproduction, but especially after IVF and embryo transfer^{5,6}, the prevalence is rising. Pisarska claims that previous dilatation and 70% of cases start with curettage. Treatment : Spearman and Parkin have supported bilateral internal artery ligation (1977). A case was treated by Scott et al. (1978) by compressing the bleeding location by MacDonald's stitch and an 11mm plastic tube. The best operation is a hysterectomy unless When packing fails to limit bleeding and the patient is quite anxious to maintain fertility

Heterotopic pregnancy: Combination pregnancies are more prevalent in the later stages of childbearing. Heterotopic pregnancy should be taken into consideration: 1. After ART 2. With rising or persistent chorionic gonadotrophin levels after D&C for an induced or spontaneous abortion 3. uterine fundus larger than menstrual dates 4. Having multiple corpus luteum 5. In the presence of symptoms and signs of an ectopic conception but no vaginal bleeding

Mankodi.^[7] reported a main splenic pregnancy as one of the other ectopic pregnancy sites. Epigastric and left shoulder pain, hypotension, tachycardia, syncope, and tenderness in the pelvis were among the findings that necessitated a laparotomy. a tear in the surface of the helmet Spleen removal was required, and microscopic examination revealed chorionic villi. Yackel and associates⁸ reported a case that was comparable. a few primary cases have been reports of hepatic pregnancy, including one with lithopaedion formation⁹. After IVF, Ferland and colleagues reported an upper retroperitoneal pregnancy and transfer of embryos

Aims and Objectives

To study and analyse the clinical presentation, risk factors, outcome immediate morbidity and mortality associated with ectopic pregnancy Methodology.

MATERIALS AND METHODS

It was an Observational study done for a period 12 months from February 2015. Patients admitted in ICU of TD MCH Alappuzha satisfying inclusion criteria were considered as sample size in the age group of 18 to 60 years during the study period. TD MCH is a tertiary care centre in the Govt. sector.

Inclusion Criteria

All patients in the age group of 18-60 years of age, admitted in ICU with sepsis and acute pancreatitis that are all willing to consent.

Exclusion Criteria

Preexisting bladder dysfunction, history of nephrolithiasis, known case of hypertension, diabetes, Recent exposure to nephrotoxic drugs, Recent contrast use (< 6 months), Pregnancy, chronic ascites, peritoneal dialysis.

Study was done only after getting written informed consent from the patient. All the facts related to patients are kept confidential and no harm occurred to patients because of the study.

Methodology

From the patients admitted in ICU, sepsis was diagnosed by SIRS criteria and acute pancreatitis patients were diagnosed by clinical features and serum amylase & serum lipase values. Among the diagnosed cases, patients were selected according to the inclusion and exclusion criteria by semi-structured questionnaire. After getting written informed consent, patient information was collected using proforma and personal interview. The proforma contains age, sex, IP/OP number, sex, address, reason for ICU admission, body temperature, pulse rate, respiratory rate, position of head, mode of ventilation, blood parameters, total leucocyte count, differential count, platelet count S. creatinine, S. amylase, S. lipase, blood pressure, mean arterial pressure, intra-abdominal pressure, abdominal perfusion pressure, renal status, urine output, chest X-Ray PA view

Data entry & data analysis

Data was entered in Microsoft Excel and analysed using SPSS software. All qualitative variables were summarized using proportions and percentages. Chi square test was used to find out association between age, sex, etiology, intra-abdominal pressure, and abdominal compartment syndrome mean renal status.

RESULTS

Prospective observational study conducted in department of obstetrics and gynaecology Government General Hospital Kakinada during a period of August 2022 to July 2023

Inclusion criteria: All diagnosed cases of ectopic pregnancy admitted to GGH Kakinada during August 2022 to July 2023

Exclusion criteria: All intrauterine pregnancies After taking detailed history of the patient general examination was done. On examination the following points were noted 1) Condition of patient - anaemia, presence of shock, restlessness, cold and clammy extremities. 2) Pulse, respiration, blood pressure and temperature. 3) Cardiovascular and respiratory systems were also examined. Abdominal examination for 1) Guarding, rigidity, tenderness. 2) Presence of mass, signs of free fluid in peritoneal cavity. 3) Presence of rare signs like Cullen's sign.

Vaginal examination 1) Bleeding -nature 2) Colour of the cervix 3) Tenderness on movement of the cervix. 4) Position of the cervix whether pulled or not. 5) Size of the uterus, mobility and consistency 6) Presence of mass in any of the fornices. Per-rectal examination was done for confirmation of findings whenever necessary.

The investigations of blood for Hb%, Blood grouping and Rh typing - Urine pregnancy test; - Ultrasonography; - TC, DC, ESR if necessary

Management

In severe conditions and having normal symptoms, such as amenorrhea, pain, and bleeding the diagnosis was made without difficulty and was supported by USG. Laparotomy. Upon arrival, following a thorough inspection, a blood sample was taken for arranging blood transfusions through grouping and cross-matching. Patients in shock were treated before being sent for surgery, blood transfusion according to the patient's need, preoperative, intraoperative, or postoperative care, certain instances The management plan was chosen based on each individual When the history and examination reveal unusual findings, emulating other conditions such as acute appendicitis, twisted ovarian cysts, and pelvic infection hospitalised for observation before being sent for a laparotomy.

Surgical Procedure

General anaesthesia was used for all surgical operations. Suitable incision was used to open the abdomen, the location of the ectopic pregnancy, the condition of the fallopian tube, the contralateral tube,

uterus and ovaries were observed. The majority of the patients presented with ruptured tubal gestation.

A unilateral salpingectomy, or choice to remove the tube, was made. In patients who did not want to get pregnant get contralateral tubectomy, salpingectomy. In situations where the opposite side has clear pathological signs, the diseased Adnexa was excised.

Postoperative Care

All patients received antibiotics at the time of the induction of anaesthesia. In the postoperative period, patients were monitored with close attention to the onset of a fever, any stomach pain, any swelling in the abdomen, wound septicemia. Patients were discharged after suture removal with instructions to come for follow-up care.

Total 10 patients are treated with medical management out of 10 patients, in 8 patients there is increase in severity of abdominal pain while treatment and they proceed for surgical management, 2 patients are successfully treated with medical management.

DISCUSSION

Ectopic pregnancy can occur at different locations with different patterns and different treatment options available. Not only saving mothers life but also preserving women's fertility by prompt and accurate detection of life threatening gynaecological emergency.

Table 1: Ectopic pregnancy in relation to age

Age group	Rose (2002)	Present study
below 20 years	30.0%	17%
21 - 30 years	43.0%	52%
31 - 36 years	20.4%	21%
> 36 years	6.45%	10%

Table 2: Ectopic pregnancy in relation to parity

Parity	Rose (2002)	Present study
0	0%	30%
1	23.6%	17%
2	32.2%	38%
3	18.2%	15%

The largest incidence of ectopic occurred in the current study between parity 0&parity3, Munro Kerr and Eastman believe that there is no explicit relationship between parity and ectopic pregnancy.

But as parity rises in the study by Rose et al. there is a reduction in the frequency of ectopic pregnancy, majority of women were young and with low parity according to Multicentric case control study (1990) of ectopic pregnancy.

Table 3: Risk factors for ectopic pregnancy

Risk factor	Wills & Mohanambal 1991	March Banks 1998	Savitha Devi (2000)	Rose et al. (2002)	Present study
None	-	-	-	32.2%	26.0%
Tubectomy	15%	5.6%	13.46%	5.4%	39.0%
D&C	-	-	-	19.35%	9.0%
IUCD	33%	11.9%	4.69%	21.5%	6.0%
PID	20%	4%	25%	34.4%	6.0%
Previous ectopic	-	-	-	3.2%	3.0%
Appendectomy& D&C	-	-	-	-	3.0%

IUCD + D&C	-	-	-	-	3.0%
D&C + infertility	-	-	-	-	2.0%
Tuberculosis + tubectomy	-	-	-	-	2.0%
D&C+infertility +tubectomy	-	-	-	-	2.0%

Several authors have reported significant rates of extended infertility linked to ectopic pregnancy (Eastman, 1976; Greenhill, 1965). Positive infertility history were observed in 2.9% (Rose et al., 2002), 48.07% (Savitha Devi, 2000), and 15.1% (March, 1998). Primary infertility was identified as a significant risk factor, reported at 11.2% (Arora et al., 1998) and 55.2% (Mitra et al., 1980).

PID: Only 6% of patients in the study had a history of PID, which is known to be a significant risk factor for ectopic pregnancy. PID subsequent to various bacterial infections increases the chance of ectopic pregnancy by 3.3 to 6 fold. Chlamydia salpingitis cases can go unnoticed, resulting in tubal injury and eventual tubal pregnancy. Younger age groups, nulliparous or poorly parous women are more susceptible to pelvic inflammation and tubal injury leading to ectopic pregnancy.

D&C: 9% of the patients had undergone D&C and previous abortion, which is associated with tubal dysfunction or damage.

Previous Ectopic Gestation: 3% of the cases had a history of previous ectopic pregnancy. The recurrence rate for ectopic pregnancy is 3.2%, and the risk is 15 times higher than in the general population.

Prior Operations: Previous abdominal procedures such as appendicectomy and ovarian cystectomy were observed. In the study, 39% of participants had undergone tubal ligation, but the details of their specific treatments were not clear.

Use of IUCD: Only 6% of patients in the study used an IUCD. Various studies have reported incidences of ectopic pregnancy associated with different types of IUCDs, ranging from 7.69% to 33%.

Table 4: Symptomatology of Ectopic Pregnancy

Symptoms	Pendse (1981)	Rose (2002)	Present Study
Amenorrhea	72.7%	78.5%	81.0%
Pain abdomen	73.6%	92.4%	96.0%
Bleeding	65.4%	66.6%	56.0%
Others	30.9%	31.2%	37.0%

Unruptured tubal pregnancy is usually asymptomatic. Symptoms and signs primarily arise from tubal rupture or abortion, leading to bleeding. However, no single symptom is definitive for ectopic pregnancy. In the current study, only a small percentage of cases exhibited classic symptoms such as amenorrhea, vaginal bleeding, dizziness, tenderness, and adnexal mass. The clinical presentation varies based on the extent and severity of the disturbance. Abdominal pain was reported in 96% of cases, while symptoms like dizziness, nausea, vomiting, and shoulder tenderness were observed in varying proportions.

Table 5: General Examination

Signs	Pendse (1981)	Rose et al (2002)	Present study
Pallor	84.5%	70.9%	84.0%
Shock	13.5%	9.7%	12.0%
None	-	-	0%

Table 6: Abdominal examination findings

Abdominal Findings	Pendse (1981)	Rose et al (2002)	Present study
Tenderness	89%	83.9%	89.0%
Guarding	5.4%	-	05.0%
Distension	16.3%	49.5%	11.0%

Tenderness over the lower abdomen was a common sign in 89% cases. distension in 11% cases and guarding seen in 30% cases, Pendase et al ,Rose et al ,Panchal D et al and Shetty et al noted similar findings.the results of this present study are consistent with the above studies.

Table 7: Vaginal examination

Vaginal Findings	Pendse (1981)	Rose et al(2002)	Present study
Cervical movement tenderness	86.30%	55.90%	51%
Fullness and mass in the fornix	54.50%	46.20%	22%

84% of cases had pallor visible during a general examination, which is consistent with other research' findings. Only 12% patients arrived in a shocked state. patients (51%) had cervical motion tenderness, Forniceal tenderness seen in majority of patients 68%, in 22% forniceal tenderness along with mass present According to

ultrasonography, an adnexal lump, which is most likely an ectopic pregnancy, was discovered in 66.6% According to a study by Rose Jophy et al. (2002).

Table 8: Condition of the fallopian tube at laparotomy

Condition of the tube	Wills& Mohanambal	Savitha Devi (2000)	Present study
Ruptured	66%	30.77%	48%
Unruptured	34%	69.23%	22%

In this present study, ruptured ectopic pregnancy seen in 48% cases and unruptured in 22% cases which is comparable to study by Wills and Mohanambal ruptured cases percentage was 66% and unruptured seen in 34% and in study by Savitha Devi ruptured cases were 30.77% and unruptured were 69.23%.

Table 9: Site of ectopic pregnancy

Site of ectopic	Khera	Mohanambal	Savitha devi	Present study
Ampullary	71.7%	34%	61.53%	66.0%
Istmal	20.75%	56%	13.46%	12.0%
Interstitial	5.66%	3%	-	0%
Ovarian	-	1%	1.92%	3.0%

In the study, the majority of ectopic pregnancies occurred in the ampullary site (66%), followed by the isthmal site (12%) and ovarian ectopic pregnancies (3%). Similar findings were reported in previous studies by Khera, Wills and Mohanambal, and Savitha Devi. Surgical management was more common due to the high proportion of ruptured ectopic pregnancies (48%) and referrals from outside facilities. Medical management was attempted in cases of unruptured ectopic pregnancies with specific criteria for beta HCG levels. Various surgical procedures were performed based on individual patient needs.

CONCLUSION

Over the past two decades, ectopic pregnancies have become more common, while maternal mortality rates have decreased. Treatment approaches have shifted from radical to conservative, and even non-surgical options such as expectant and medical management are now available. However, a major challenge faced by our institution is the late presentation of patients with ruptured ectopic pregnancies, requiring surgical emergency management despite the availability of early diagnostic tools. It is crucial for medical professionals to be aware that any woman in the reproductive age group presenting with lower abdominal pain should be considered as a potential case of ectopic pregnancy, regardless of the presence of amenorrhea or previous sterilization.

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