



"A PROSPECTIVE AND OBSERVATIONAL STUDY OF PREVALENCE, RISK FACTORS AND OUTCOME OF ECTOPIC PREGNANCY ADMITTED TO OBSTETRICS AND GYNAECOLOGY DEPARTMENT OF TERTIARY CARE CENTER OF SOUTH GUJARAT"

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ABSTRACT

The word ectopic is from Greek; 'EX' and 'TOPOS' meaning "out of place". It is defined as any intra or extra uterine gestation in which the fertilized ovum implants at an aberrant site conducive to growth and development. (1) The incidence of ectopic pregnancy is 1.5-2% worldwide. Dramatic rise in the sexually transmitted diseases, use of intrauterine contraceptive devices, genital tuberculosis in developing countries, use of assisted reproductive technologies contributory to the increasing ectopic pregnancies in the world. high resolution ultrasonography and beta hCG levels, it is possible early diagnosis of ectopic pregnancy. **Aims And Objectives:** To analyze the risk factors, and outcome in patients with ectopic pregnancy. **Materials And Methods:** A prospective study was conducted collecting data of 50 consecutive consenting subjects admitted in tertiary health care center New civil Hospital, Surat, South Gujarat over period of May 2023 to April 2024 after applying inclusion and exclusion criteria. **Results:** Majority of patients belonged to age group of 26-30 years (56%). Majority of the cases (52%) with no risk factors (20.84%) of pelvic inflammatory disease. (16.67%) with previous cs with scar site ectopic pregnancy. The classical triad of amenorrhea, bleeding p/v and abdominal pain was seen in 68% of all patients (58%) cases were that of ruptured tubal ectopic pregnancy. (28%) of unruptured tubal ectopic pregnancy. (70%) patients underwent salpingectomy at laparotomy. **Conclusions:** There is increased incidence of ectopic pregnancy but decreased Maternal morbidity and mortality due to ectopic pregnancy during past decades. Beta HCG assay and trans vaginal sonography aid earlier diagnosis, maternal survival and fertility conservation. Even though an early diagnostic tools available we had to manage quite a number of cases as surgical emergencies as they brought as of ruptured ectopic pregnancy or failure of medical management. As increase in number of cesarean sections now a days increase an incidence of cesarean scar ectopic pregnancy.

KEYWORDS : IUFD-Intra uterine fetal demise, ART-Assisted reproductive technology, USG-Ultrasonography.

INTRODUCTION

The word ectopic is from Greek; 'EX' and 'TOPOS' meaning "out of place". It is defined as any intra or extra uterine gestation in which the fertilized ovum implants at an aberrant site conducive to growth and development. (1)

The incidence of ectopic pregnancy is approximately 1.5-2% worldwide. (2) Dramatic rise in the sexually transmitted diseases, use of intrauterine contraceptive devices, genital tuberculosis in developing countries, use of assisted reproductive technologies (ART) to name a few are contributory to the increasing ectopic pregnancies in the world. (5)

With the advent of high resolution ultrasonography and beta hCG levels, it is possible to diagnose ectopic pregnancy at an earlier gestation than in the past. (8)

The term ectopic is more comprehensive than extra uterine or tubal pregnancy for it embraces all varieties of gestation outside the uterine cavity. This gives rise to a variety of other ectopic gestations like cesarean scar ectopic, abdominal pregnancy, cervical pregnancy and others. (3) Rapidly changing diagnostic and therapeutic approaches makes ectopic pregnancy an exciting and ever evolving field of study. (7)

Materials And Methodology

Study Setting: Department of Obstetrics and Gynecology, GMCS, GUJARAT

Duration Of Study: MAY 2023 to APRIL 2024

1. Inclusion Criteria :

- cases of ectopic admitted to my hospital during the time of

study.

2. Exclusion Criteria :

- Intrauterine pregnancy
- IUFD
- Non consenting women.

3. Measuring Tools: Age, risk factors, clinical features, USG finding, management, cesarean scar ectopic pregnancy, complications.

4. Outcome Variables

- Period of gestation
- Risk factors
- Mode of management
- Laparoscopy
- Laparotomy
- complications

5. Brief Methodology :

All women with Ectopic pregnancy in tertiary health care center of South Gujarat were enrolled in this study. All patients were followed till discharged from hospital.

All data related to ectopic pregnancy outcome were collected from case records of mother in structured proforma.

This data was analyzed by appropriate statistical test.

6. Ethical Approval :

Ethical approval was granted by Human Resource Research Committee, confidentiality was maintained.

RESULTS:

Table 1 : : Age Distribution Of Ectopic Pregnancy

AGE GROUP	PRESENT STUDY	TAHMINA ET AL ⁽³⁾	PRITTI ET AL ⁽⁴⁾
21-25 YEARS	32.00%	25.5%	39.28%
26-30 YEARS	56.00%	26.1%	35.71%
31-35 YEARS	12.00%	40.3%	11%

In our study, maximum ectopic pregnancies (56%) occurred between 26-30 years.

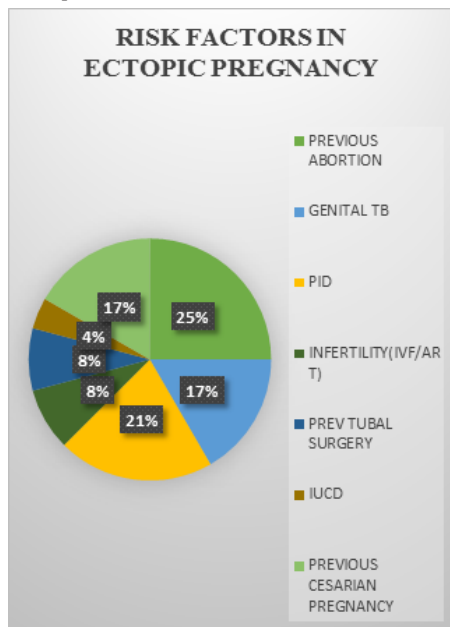
Table 2: Table Showing Risk Factors In Ectopic Pregnancy

RISK FACTORS	NO OF CASES (N=24)	PRESENT STUDY (%)	TAHMINA ET AL ⁽³⁾ (%)	PRITTI ET AL ⁽⁴⁾ (%)
PREVIOUS ABORTION	6	25%	36.1	19.41
GENITAL TB	4	16.67%	-	2.04
PID	5	20.84%	15.3	19.39
INFERTILITY(IVF/ART)	2	8.33%	18.1	22.45
PREV TUBAL SURGERY	2	8.33%	-	6.12
IUCD	1	4.16%	4.2	10.2
PREVIOUS CESAREAN PREGNANCY	4	16.67%		
TOTAL RISK FACTORS	24			

Previous abortion was found to be the most common risk factor in our study and 6 patients (25.00%) of all the known risk factors in our study. Tahmina et al⁽³⁰⁾ also reported previous abortion as the most common risk factor in their study (36.1%). 5 patients (20.84%) of the 24 patients gave a previous history of pelvic inflammatory disease.

There were 4 patients (16.67%) of patients in our study have previous cesarean section and developed scar site ectopic pregnancy.

4 patients (16.67%) of patients in our study had a history of tuberculosis and had taken AKT for the same in the past. ART constituted 2 patients (8.33 %) of all risk factors

**Table 3: Mode Of Presentation**

MODE OF PRESENTATION	NO OF PATIENTS (N=50)	PRESENT STUDY (%)	TAHMINA ET AL ⁽³⁾ (%)	PRITTI ET AL ⁽⁴⁾ (%)
AMENORRHEA	48	96.00%	93.1	89.79
ABDOMINAL PAIN	45	90.00%	81.9	46.93
BLEEDING PV	34	68.00%	50	52.04
DIZZINESS/SYNCOPE	08	16.00%		

ASYMPTOMATIC	4	08.00%		
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The classical triad of amenorrhea, bleeding p/v and abdominal pain was seen in 68% of all patients.

Table 4: Ultrasonography Findings

FINDINGS	NO OF CASES (N=50)
RUPTURED	29 (58%)
UNRUPTURED	14 (28%)
SCAR ECTOPIC	4 (8%)
HETEROTOPIC	3 (6%)

Out of 50 cases, 58% cases were that of ruptured tubal ectopic pregnancy. 28% cases were that of unruptured tubal ectopic pregnancy. 4 cases(8%) were reported of scar ectopic pregnancy. 3 cases (6%) were that of heterotopic pregnancy.

Table 5: Medical Vs Surgical Management And Its Association With Levels Of Serum Beta Hcg Levels

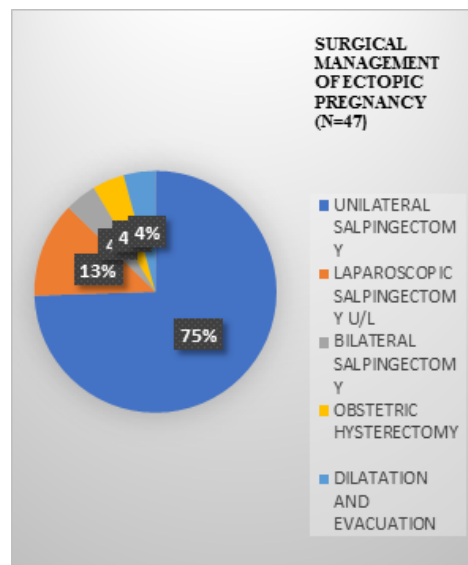
BETA HCG LEVELS (IU/ml)	MEDICAL MANAGEMENT ONLY	SURGICAL MANAGEMENT ONLY	SURGERY AFTER FAILURE OF MEDICAL MANAGEMENT	TOTAL (N=50)
<5000	3 (14.28%)	16 (76.19%)	2(09.53%)	21
5000-10000	0	24 (100%)	0	24
>10000	0	5 (100%)	0	05

3(14.28%) patients whose beta hCG was below 5000 IU/mL, were medically managed keeping view of the clinical history and vital stability.. All patients whose beta hCG levels were above 5000 IU/mL were managed surgically.

Table 6: Surgical Management Of Ectopic Pregnancy(n=47)

OPERATIVE PROCEDURE DONE	PRESENT STUDY(N=47)	PRITTI ET AL ⁽⁴⁾ (%)
UNILATERAL SALPINGECTOMY	35(74.48%)	75.90
UNILATERAL LAPAROSCOPIC SALPINGECTOMY	6(12.77%)	2.409
BILATERAL SALPINGECTOMY	2(04.25%)	2.409
OBSTETRIC HYSTERECTOMY	2(04.25%)	
DILATATION AND EVACUATION	2(04.25%)	
TOTAL	47 (100%)	

35(74.48%) patients underwent salpingectomy at laparotomy. 6 patients(12.77%) underwent laparoscopic salpingectomy in stable cases.

**Table 7 : Data On Management Of Cesarean Scar Pregnancies**

DATA ON SCAR PREGNANCY	NO. OF PATIENTS	GESTATIONAL AGE
RUPTURED	2(50%)	>6 WEEKS
UNRUPTURED	2(50%)	<6 WEEKS

Two patient of Cesarean scar pregnancy presented with torrential bleeding after undergoing dilatation and evacuation with gestational age >12 weeks with rupture cesarean scar.

The patients were taken for an Emergency Laparotomy and intra-operative decision of Obstetric hysterectomy was made. Stable patient was discharged after a few days. One patient of cesarean scar ectopic pregnancy was managed medically by three doses of inj. Methotrexate given serially resulting in successful death of the scar pregnancy and its detachment from the scar site. As it subsequently was lodged in the cervical canal, evacuation by dilatation and evacuation was undertaken thereafter and the patient was discharged successfully. One patient with cesarean scar ectopic pregnancy was managed by usg guided manual vacuum aspiration and managed successfully.

Table 8 : Data On Blood Transfusions In Management Of Ectopic Pregnancy

BLOOD TRANSFUSIONS	NO OF PATIENTS	RAJNI M STUDY
REQUIRED	35 (70.00%)	71%
NOT REQUIRED	15 (30.00%)	14.5%

35 (70.00%) of the 50 patients required blood transfusions in the form of packed cells, fresh frozen plasma and cryoprecipitate.

DISCUSSION :

Ectopic pregnancy may occur at any time from menarche to menopause. In our study, maximum ectopic pregnancies (56%) occurred between 26-30 years. While in the studies conducted by Tahmina et al⁽³⁾ and Pritti et al⁽⁴⁾, maximum ectopic pregnancies occurred in age range from 31-35 years and 21-25 years respectively.

Majority of the cases (52%) i.e. 26 out of 50 ectopic pregnancies occurred without the presence of any known risk factors in our study which is comparable to study done by Pritti et al⁽⁴⁾ previous abortion was found to be the most common risk factor in our study and 6 patients (25.00%) of all the known risk factors in our study. Tahmina et al⁽³⁰⁾ also reported previous abortion as the most common risk factor in their study (36.1%).

PID is known to cause significant disfigurement of fallopian tube and also destroys the motility of the tube, hence favoring implantation in the tube by blocking ovum motility. 5 patients (20.84%) of the 24 patients gave a previous history of pelvic inflammatory disease. Pritti et al⁽⁴⁾ reported 19.39% contribution of PID among all risk factors of ectopic pregnancy. 4 patients (16.67%) of patients in our study had a history of tuberculosis and had taken AKT for the same in the past. Gandotra et al⁽⁵⁾ also reported Tuberculosis to be a major etiological factor in development of ectopic pregnancy. There were 4 patients (16.67%) of patients in our study have previous cesarean section and developed scar site ectopic pregnancy. ART constituted 2 patients (8.33%) of all risk factors.

Tahmina et al⁽³⁾ reported 18.1% contribution out of all risk factors. Strandell and associates found that a history of a previous ectopic pregnancy appears to be a risk factor for ectopic pregnancies after IVF.

The classical triad of amenorrhea, bleeding p/v and abdominal pain was seen in 68% of all patients whereas in the study conducted by Tahmina et al⁽³⁾, the classic triad was reported in only 40% of patients with ectopic gestations.

Out of 50 cases, 58% cases were that of ruptured tubal ectopic pregnancy. 28% cases were that of unruptured tubal ectopic pregnancy. 4 cases were reported of scar ectopic pregnancy. 3 cases were that of heterotopic pregnancy with all 3 cases of intrauterine pregnancy coexisting with tubal pregnancy, which was confirmed diagnosis of USG and HPE reports.

As shown in the above table, 3 patients whose beta hCG was below 5000 IU/mL, were medically managed keeping view of the clinical history and vital stability. All patients whose beta hCG levels were above 5000 IU/mL were managed surgically. 35 patients underwent salpingectomy at laparotomy. 6 patients underwent laparoscopic salpingectomy in stable cases.

35 (70.00%) of the 50 patients required blood transfusions in the form of packed cells, fresh frozen plasma and cryoprecipitate. As compared to Rajni M study where 71% patients required blood and blood products.⁽⁶⁾

CONCLUSION

There is increased incidence of ectopic pregnancy but a decreased Maternal morbidity and mortality due to ectopic pregnancy during past decades.

Beta HCG assay and (TVS) trans vaginal sonography aid earlier diagnosis, maternal survival and fertility conservation .

Even though an early diagnostic tool available we had to manage quite a number of cases as surgical emergencies as they brought in either established diagnosis of ruptured ectopic pregnancy or failure of medical management

As increase in number of cesarean sections now a days increase an incidence of cesarean scar ectopic pregnancy.

If it diagnosed at an early gestational age, then we can save the patients from lot of maternal morbidity and mortality but if diagnosed at late gestational age >12 weeks then during evacuation end up to obstetrics hysterectomy also.

Having said that surgeons should not compromise the health of the patients and take appropriate decision of radical over conservative management as and when required.

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