ORIGINAL RESEARCH PAPER
Volume-9 | Issue-5 | May-2020 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

RETROSPECTIVE STUDY OF ECTOPIC PREGNANCY IN TERTIARY CARE CENTRE : A TWO YEAR STUDY

Obstetrics & Gynaecology

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ABSTRACT

Background: Diagnosis of ectopic pregnancy was frequently missed and rising trend in incidence of ectopic pregnancies necessitates awareness about risk factors, resultant morbidity and mortality. Aim of the study was to determine the incidence, clinical presentation, risk factors, treatment and morbidity and mortality associated with ectopic pregnancy.

Methods: This retrospective study was conducted in the department of obstetrics and gynaecology, Bhima Bhoi Medical College&Hospital, Balangir, Odisha during the period of November 2017 to October 2019 for the period of 2 years. The following parameters: age, parity, gestational age, risk factors, clinical presentation, site of ectopic, diagnostic methods, mode of treatment and morbidity were noted.

Results: Out of 20717 deliveries, 64 were ectopic pregnancies (0.31 %). Women with age 20-30yrs had highest incidence (73.43%). Ectopic pregnancies were common in multiparouswomen than primigravida . Common symptoms: abdominal pain (95.31%), amennorhea (90.62%), bleeding per vaginum (39.06%). Urine pregnancy test positive in 93.75%cases. Etiology was pelvic infection (29.69%), past h/o abortion (15.62%) infertility (3.12%), previous ectopic (1.56%), contraception (6.25%), past tubectomy (6.57%). Right sided ectopic was more common. Site of ectopic: Common in fallopian tube- ampullary region (65.62%), cornua (15.62%), isthmus (10.93%), fimbria (4.68%), followed by ovarian ectopic (3.12%). About 67.18% of ectopic was ruptured, almost 60% of these patients presented with shock at the time of presentation. Tubal abortions were seen in 18.75% of patients. Most of cases being ruptured ectopic pregnancies, salpingectomy in 92.18% and salpingoopherectomy in 4.68%. Morbidity was blood transfusion (90.63%), wound complications 7.81% and no mortality.

Conclusions: The incidence of ectopic pregnancy is on rise. It is a common life threating emergency in first trimester of pregnancy that leads to serious maternal morbidity and also can cause mortality. A high index of suspicion is required for its early diagnosis, so that proper management can be done and the complications can be avoided.

KEYWORDS

INTRODUCTION

Ectopic pregnancy is one of the nightmare and a life threatening condition. It is one in which fertilized ovum become implanted in site other than normal uterine cavity. Ectopic pregnancy commonly occurs in the fallopian tube [1]. Ectopic pregnancy is the leading cause of maternal death in early pregnancy [2].Risk factors like previous ectopic pregnancy, tubal corrective surgery, tubal sterilization, intrauterine devices, documented tubal pathology, infertility, assisted reproductive techniques, PID, smoking, prior abortions, multiple sexual partners and prior delivery have been implicated in the development of the ectopic pregnancy [3].

PID is the commonest cause of ectopic pregnancy. It may be due to STI, mainly chlamydia and gonorrhea and others being postabortal, puerperal or secondary to an extra genital pelvic infection or surgery [4].Chlamydia trachomatis has been linked to 30-50% of all ectopic pregnancies [5].The risk of tubal pregnancy after any sterilization procedure is 5% to 16% [6].

Intrauterine Contraceptive Device (IUCD) prevent intrauterine pregnancy effectively, tubal implantation to a lesser extent and chances of ovarian pregnancy are more. Cu-T 380A and Levenorgestrel device have got the lowest rate of ectopic and progestasart has got the highest rate [7]. Progestational agents inhibit tubal motility and favors ectopic pregnancy.

Mullerian anomalies can increase the risk of ectopic pregnancy.

Increase in chromosomal abnormalities with advancing age and age-related changes in tubal function delays ovum transport there by resulting in tubal implantation [8].

Smoking causes ectopic by delayed ovulation, altered tubal and uterine motility and or altered immunity.

The risk of ectopic pregnancy increases in women who conceive via ART [9]. Tubal reconstructive surgery increases the risk ofectopic.

The diagnosis of ectopic pregnancy is complicated by wide spectrum of clinical presentations, from asymptomatic cases to acute abdomen, and hemodynamic shock [10].

Management depends upon clinical presentation, site of rupture and future reproductive desire. Management can be medical, surgical or conservative.

Early diagnosis reduces the risk of tubal rupture and allows more conservative medical treatments to be employed [11]. In order to decrease maternal mortality and morbidity due to ectopic pregnancy, there is a need for early diagnosis. The availability of sensitive BhCG and high-resolution sonography has resulted in earlier diagnosis and has reduced mortality rate [12].

Worldwide the incidence of ectopic pregnancy is 0.25%-2.0% [13].

AIM AND OBJECTIVE

To know the age group, parity and risk factors with respect to ectopic pregnancy.

To know the clinical presentation and intervention required. To know the outcome of ectopic pregnancy.

METHODS

This retrospective study was conducted in the department of obstetrics and gynaecology,BhimaBhoiMedicalCollege&Hospital, Balangir, Odisha during the period of November 2017 to October 2019 for the period of 2 year.

The case sheets of the patients with ectopic pregnancy were traced through the labour ward registers and operation theatre registers. Information regarding the total number of ectopic pregnancies in the study period, details of demographic characteristics, clinical symptoms and signs, diagnostic tools used, treatment, risk factors for the ectopic pregnancy as well as associated morbidity and mortality were obtained.

INCLUSION CRITERIA –

All the cases diagnosed as ectopic pregnancy admitted during the study period of 2 year .

EXCLUSION CRITERIA –

All intrauterine pregnancies.

RESULTS

During the study period of two years, there were 20,717 deliveries in our hospital and 64 cases were diagnosed as ectopic pregnancy giving the incidence of 0.31%.

A majority of the patients (73.43%) belonged to the age group of 20-30 yrs (Table 1).

Table 1: Age of study population.

Age	Number	Percentage
<20	4	6.25%
20-25	26	40.62%
26-30	21	32.81%
>30	13	20.31%

In the present study, 85.94% were multigravida and 14.06% were primi gravida (Table 2)

Table 2: Gravidity.

Gravida	Number	Percentage
Primi	9	14.06%
2nd	22	34.37%
3rd	30	46.87%
>3	3	4.69%

Risk factors

In our study group, 62.5% of the patients had identifiable risk factors, of which past history of PID was present in 29.69%, history of previous abortion/ dilatation and curettage (D & C) in 15.62%, infertility in 3.12%, uterine anomalies in 1.56%, history of previous ectopic pregnancy in 1.56%, usage of intrauterine contraceptive device (IUCD) 1.56% and oral contraceptive pills (OCP) in 4.69% and history of tubectomy in 4.69% were noted.Only 37.5% of the patients were without any prior risk factors (Table 3).

Table 3: Risk factors for ectopic gestation.

Risk factors	Number of cases	Percentage
No risk factor	24	37.5%
H/O PID	19	29.69%
H/O Abortion	10	15.62%
Uterine anomalies	1	1.56%
H/O Previous ectopic	1	1.56%
H/O IUCD	1	1.56%
Irregular use of OCP	3	4.69%
H/O Infertility	2	3.12%
Tubectomy	3	4.69%

Clinical Presentation

In the present study, 95.31% had abdominal pain, followed by H/o amenorrhea in 90.62% H/O Bleeding pervaginum in 39.06%, signs of adnexaltenderness in 87.5% and shock in 40.62% of cases.

UPT was positive in 60 cases (93.75%) and negative in only 4 cases (6.25%), USG revealed ruptured ectopic pregnancy in67.18% of cases(43), unruptured in 14.06% of cases (9), heterogeneous mass with minimal free fluid in POD in 18.75% of cases(12).

Table – 4: clinical presentation

Clinical presentation	Number	Percentage
Pain abdomen	61	95.31%
Amenorrhoea	58	90.62%
Bleeding per vagina	25	39.06%
Shock	26	40.62%
Adnexal tenderness	56	87.5%

In 96.88% of cases ectopic pregnancy was tubal and it was more common in right side (64%). A majority of the cases were ampullary pregnancies (65.62%) cornual pregnancy was seen in 15.62% and 10.93% were isthmal pregnancies while 4.68% were in fimbria (Table 5)

Table 5: Site of ectopic.

Site of ectopic	No.	Percentage
Ampulla	42	65.62%
Cornual	10	15.62%
Isthmus	7	10.93%
Fimbria	3	4.68%
Ovarian	2	3.12%

The most common procedure which was done was salpingectomy . In all cases of post sterilization ectopic gestation, salpingectomy of the affected tube and relegation of the other tube were undertaken to avoid recurrence of ectopic pregnancy on the other side. In ovarian ectopic pregnancy salpingeoophorectomy was done. In one case of ruptured ectopic pregnancy with broad ligament hematoma, total abdominal hysterectomy was done.

Table 6: Surgical treatment in cases of ectopic gestation.

Operative procedure	Number of cases	Percentage
Unilateral salpingectomy	45	70.31%
Unilateral salpingoophorectomy	3	4.68%
Unilateral salpingectomy + ligation tube on contralateral side	14	21.87%
Bilateral salpingectomy	1	1.56%
TAH+bilateral salpingectomy	1	1.56%

Most of these cases (58) had blood transfusions intra-operatively and postoperatively. Blood transfusion was needed in 90.63% of patients. Other morbidities noted was sepsis and wound dehiscence (table 7). No maternal mortality noted.

Table – 7: Complications

Complication	Number	Percentage
Blood transfusion	58	90.63%
Sepsis	5	7.81%
ICU admission	2	3.13%
Wound dehiscence	5	7.81%
Mortality	0	0%

DISCUSSION

A total of 64 cases of ectopic pregnancies were recruited in the study group. A total of 20717 deliveries were conducted during the study period, 64 cases were diagnosed as ectopic pregnancies giving an incidence of 3.1 for 1000 deliveries. The present study is correlating with the study done by Musa, et al. [14] (1.74%). Rising incidence of Sexually Transmitted Infections, induced abortions, social and life style changes, late child bearingin career women, Assisted Reproductive Technologies and advances in diagnostic techniques are the contributing factors for rising incidence of ectopic pregnancy globally.

Majority of women (73.43%) in our study group belonged to the age group of 21-30 years, which is close to the studies done by Samiya Mufti, et al. [15] (75.4%), Panchal D, et al. [16] (71.66%) and Rashmi A Gaddagi, et al. [17] (70.2%). Most of the women in India marry at an early age and completes their family at an early age[18]. This age corresponds to the age of peak sexual activity and reproduction.

In the present study group, majority of women with ectopic pregnancy were multi gravidac (85.94%) This correlates with the studies done by Shraddha Shetty K, et al (83.9%) Panchal D, et al (81.66%) and Poonam, et al, (83.6%) [19,16,20]. The higher incidence in multigravidate is probably due to previous miscarriages and infection resulting in tubal damage.

In the present study group history of PID was present in 29.69% of the cases with ectopic pregnancy. This is correlating with the study done by Bhavna, et al 22.7% of the cases with ectopic pregnancy [21].

Endosalpingitis damages the mucosa and may entrap the migrating embryo, leading to ectopic implantation; Exosalpingitis give rise to peritubal adhesion, impairing peristaltic movements, giving rise to inadequate transportation.

In the present study group, 15.62% of patients had history of previous abortion which is close to the study done by Khaleeque F,et al. [22] (12.9%). The relationship between prior abortions and ectopic pregnancy is explained by the postabortal infections leading to tubal damage. In the past, these post-abortal infections were due to illegal abortions which were not done under aseptic precautions and lack of proper antibiotic coverage.

In our study group,3.12% of the women with ectopic pregnancy were infertile which is correlating with the studies done by Panchal D, et al.[16] (11.66%) and samiya Mufti, et al.[15](8.77%). The association between infertility, previous pelvic infection and tubal pathology is the possible explanation.

In our study group 1,56% of the women had history of previous ectopic pregnancy which is correlating with the studies done by Dr. Samiya Mulfti, et al.[15](5.26%) and Uzma Shabab, et al[23](5%). There is increased risk of ectopic with previous ectopic pregnancy because it reflects the underlying tubal pathology which is almost always bilateral.

In our study group, 4.69% of the women with ectopic pregnancy had tubal sterilization which correlates with the studies done by Uzmashabab, et al[23] (5%) and Shrestha, et al.[24](5%). Improper surgical technique and formation of peritubal fistulas may result in ectopic pregnancy.In postpartum period, edematous, congested and friable tube increases the chance of incomplete tubal occlusion resulting in ectopic implantation.

1.56% woman with IUCD had ectopic pregnancy which correlates with the studies done by Shraddha Shetty K, et al[19] (6.4%) Shrestha et al[24] (5%) and WM Fageeh [25](5.8%) IUCD has no effect on ovulation, it prevents intrauterine pregnancy but nottubal and ovarian pregnancy. The risk of tubal pregnancy is more if a woman conceives with IUCD in situ.

Urine pregnancy test was positive in 90.4% of the cases which correlated with the study done by Rashmi A Gaddagi, et al.[17] (97.3%) and WM Fgeeh [25] (96%).

In the present study group, 90.62% of the patients had history of amenorrhea, 95.31% had history of pain abdomen and 39.06% had bleeding PV. This is correlating with the study done by Gupta R, et al. [26] in which amenorrhea was present in 90%, pain abdomen in 87.5% and bleeding PV in 67.5% of the patients.

The urinary pregnancy test, serum β-hGG and ultrasound were the diagnostics tools used for diagnosis of ectopic pregnancy. Studies have shown that Ultrasonography should be the initial investigation for symptomatic women in their first trimester; when the results are indeterminate, the serum βhuman chorionic gonadotropin concentration should be measured. Serial measurement of β-hGG and progesterone concentrations may be useful when the diagnosis remains unclear [27].

The commonest site of location of the ectopic pregnancy was in the ampulla of the fallopian tube. Ampullary part of the tube was commonly involved in most of the ectopic pregnancies in other studies [28].

Right, sided tubal pregnancy was present in 64% cases and left tubal involvement in 36% cases, consistent with other studies [29]. Ruptured ectopic pregnancy was present in 67.18% of cases, unruptured in 14.06% of cases (9), tubal abortion in 18.75% ofcases (12).

As medical management needs extremely close follow up and hospitalization, surgical management is still the method of choice in our country [30]. Laparaoscopy and medical therapy have now emerged as the widely used therapeutic modalities with great succession in terms of reduced morbidity, shorter hospital stay and conservation of fertility [31]. However choice depends upon early identification of ectopic pregnancy and stable condition of patients[32].

Morbidity included anemia, blood transfusion and wound infection. By reducing and identifying the risk factors and catching the patients at the earliest it is possible to improve the prognosis so far as morbidity, mortality, and fertility are concerned [33]. No maternal mortality found in our study, consistent with A, Abbas and H. Akram study [34].

CONCLUSION

Ectopic pregnancy is a nightmare for the obstetrician. High degree of suspicion and early diagnosis is the key to successful management. The dictum should be to have a high degree of suspicion in a woman in reproductive age group with pain abdomen or bleeding PV or when she comes in shock irrespective of tubal ligation as in many cases there may be not even a history of amenorrhea. PID is considered a major etiologic factor in ectopic pregnancy. Because the incidence of PID has risen dramatically over the past two decades, it has been suggested that part of the increased incidence of ectopic gestation can be attributed to this disease. Increasing awareness among sexuallyactive women and men regarding safe sexual practices and contraception decrease abortions and reduces the risk of ectopic pregnancy. All high risk women should be screened at the earliest with serum β-hCG and TVS. The impact on future fertility can be improved by focusing on primary prevention and early diagnosis before rupture.

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