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Clinical Presentation and Operative Findings of Ectopic Pregnancy

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Abstract **Original Research Article**

Objective: In this study our main goal is to evaluate the clinical and operative findings of ectopic pregnancy. ***Method:*** This descriptive study was carried out at tertiary medical college and hospital from January to December 2018-2019. Where 80 Patients who were clinically suspected but laparotomy findings ruled out ectopic pregnancy. ***Results:*** During the study, history of pelvic infection (26.25%), induced abortion (17.5%), previous MR (16.25%) and sub fertility (11.25%) constitute the main bulk of risk factors. Most of the patients (61.25%) presented with amenorrhoea (6-8 weeks) and 21.25%. cases had no history of amenorrhoea. Fallopian tube was affected 92.5% of cases & ampullary ectopic was most common (53.75%). Also, all cases were managed surgically. Salpingectomy with or without contralateral tubal ligation (85%) was the most common operation. ***Conclusion:*** Although ectopic can never be eliminated completely but some risk factors, responsible for ectopic pregnancy can be prevented by educational efforts. And early diagnosis and prompt conservative surgical or medical management will help in reducing maternal mortality and morbidity.

Keywords: ectopic pregnancy, sub fertility, induced abortion.

INTRODUCTION

An ectopic pregnancy is one in which the fertilized ovum becomes implanted in a site other than the normal uterine cavity [1]. It is a significant cause for maternal morbidity & mortality as well as fetal loss [2]. The human blastocyst normally implants in the endometrium along the anterior or posterior wall of uterus, usually in the posterior wall. When the blastocyst implants in a site other than the normal uterine cavity, it is called ectopic pregnancy. The possible sites are: fallopian tube, ovary, abdominal cavity, broad ligament, rudimentary horn of a bicornuate uterus and cervix. But the commonest is the fallopian tube (95%). Tubal pregnancy accounts for about 95% of total ectopic pregnancies. The location within the tube are as follows: ampullary (55%), Isthmic (25%), fimbrial (17%), interstitial (3%) [1]. Ovarian pregnancy (< 0.5%) may be classified as ovarian, tubo-ovarian, abdomino-ovarian (Secondary abdominal pregnancy)[1].

Ectopic pregnancy, probably first described in AD 963 by Albucasis, an Arab writer and the first successful operation for ectopic pregnancy was performed in 1883 by Lawson Tait of Birmingham [3].

The incidence of ectopic pregnancy varies from place to place even in the same country [1]. Recent evidence indicate that the incidence of ectopic pregnancy such as in France- 15 per 1000 pregnancies and in India-1 in 100 deliveries. In the U.K. there are around 11,000 cases of ectopic pregnancies per year (incidence 11.5) per 1000 pregnancies with 4 deaths (a rate of 0.4 per 1000 pregnancies)[22]. In the U.S.A., the number of ectopic pregnancies has increased dramatically in the past few decades. Based on hospital discharge data, the incidence of ectopic pregnancy has risen from 4.5 cases per 1000 pregnancies in 1970 to 19.7 cases per 1000 pregnancies in 1992 [24]. In the multicentric case control study of ectopic pregnancy in India (ICMR Task force project, 1990), the incidence of ectopic pregnancy was 3.12 pre 1000 pregnancy or 3.86 per 1000 live birth.

There has been a significant increase in the number of cases of ectopic pregnancy. Pelvic inflammatory disease, induced abortion, history of infertility, use of intrauterine contraceptive device (IUCD) pelvic surgery, STDs significantly increase the risk of ectopic pregnancy [4]. Women, who have had pervious tubal surgery, are more prone to tubal ectopic pregnancy. More ectopic pregnancies occur in infertile women in lower socioeconomic group & in women who have had a previous ectopic pregnancy [1].

The common presenting features are lower abdominal pain, delayed or irregular menstruation followed by vaginal bleeding or brown discharge and syncopal attack [4]. Early diagnosis & prompt treatment not only reduce the mortality but also morbidly. Diagnosis of ectopic pregnancy has been done by proper history taking, careful physical examination and by measurement of serial β-hCG, ultrasonography (Transvaginal is superior to transabdominal), serum progesterone and direct vision by laparoscopy [2]. Early and reliable diagnosis of ectopic pregnancy before tubal rupture is important in preserving future fertility by allowing conservative treatment [3].

Over the past decade, the management of ectopic pregnancy has evolved from a radical operative approach (salpingectomy) to a more conservative surgical or medical treatment [5].

The traditional method of management of ectopic pregnancy is removal of the affected fallopian tube. With the improvement in diagnostic means the vast majority of ectopic pregnancies are diagnosed at unruptured states and this has stimulated trends towards non-surgical method of treatment. Most of these conservative, non-surgical methods have proved efficient in 80-90% of appropriately selected cases [3]. Management must be tailored to the clinical condition and future fertility requirement of the women [6].

Choice of the best management technique, ranging from expectant, to outpatient medication, to conservative versus radical surgery is based on the patient's clinical condition, factors related to the ectopic such as size, evidence of rupture, or rate of β-hCG rise and the patient's wishes.

The study will be carried out to analyze the cases of ectopic pregnancy for early and accurate diagnosis, prompt and effective management of ectopic pregnancy with identification of risk factors in our situation. So that appropriate measures can be taken to reduce ectopic pregnancy cases and to reduce maternal mortality and morbidity and thereby to improve the reproductive health status of the women of our country [8].

OBJECTIVES

General objectives

- To evaluate cases of ectopic pregnancy for diagnosis, identification of risk factors and laparotomy findings in this situation.

Specific objectives

- To find out the clinical presentation of ectopic pregnancy cases.
- To analyze operative findings.
- To find out risk factors in relation to ectopic pregnancy.

METHODOLOGY

Study design

- It was a descriptive study.

Place and period of study

- This study was carried out at tertiary Medical College & Hospital, Dhaka from January to December, 2018 to 2019.

Sample population

- A total of 80 women who were clinically suspected ectopic pregnancy included in the study.

Sampling technique - Purposive sampling.

Inclusion criteria

- Clinically suspected ectopic pregnancy.
- Clinically diagnosed ectopic pregnancy supported by positive urinary pregnancy test or serum β-hCG and USG findings and sometimes culdocentesis.

Exclusion criteria

- Patients who were clinically suspected but laparotomy findings ruled out ectopic pregnancy.

Ethical consideration

- Ethical issue will be addressed duly with due consent from the patient.

Data collection procedure

- After taking informed consent from each patient, a very careful history with particular attention to socio-demographic, menstrual, obstetric and contraceptive history, a through physical examination was done and diagnosis was established clinically in majority of cases. Pregnancy test and ultrasonography were done in most cases to support the clinical diagnosis. Hemoglobin estimation and blood grouping were done in all cases. Finally, laparotomy was done to confirm the diagnosis and manage the case. All the data were collected in a pre-designed data collection sheet.

STATISTICAL ANALYSIS

- Data were analyzed in computer based programme Statistical Analysis for Social Science (SPSS) for windows version 23.

RESULTS

In table-1 shows age distribution of the study where age ranges of patients in this study were 18 – 45 while 75% of the patients belonged to the age groups of 20 to 30 years. The following table is given below in detail:

Table-1: Age distribution of ectopic pregnancy (n-80)

Age in years	Number of patients	Percentage
Up to 19 years	3	3.75%
20 to 30 years	60	75%
31 to 45 years	17	21.25%

In table-2 shows parity distribution of the study group where the peak incidence was among the nulliparous (41.25%) and incidence is low among those who are Para more than 5. The following table is given below in detail:

Table-2: Parity in patients with ectopic pregnancy. (n-80)

Parity	No. of cases	Percentage
0	33	41.25%
1	21	26.25%
2	7	8.75%
3	11	13.75%
4	5	6.25%
5 or > 5	3	3.75%

In table-3 shows predisposing factors of ectopic pregnancy. (n-80). Where history of pelvic infection (26.25%), induced abortion (17.5%), previous MR (16.25%) and sub fertility (11.25%) constitute the main bulk of risk factors. The following table is given below in detail:

Table-3: Predisposing factors of ectopic pregnancy. (n-80)

Risk Factors	No. of Patients	Percentage
Pelvic infection	21	26.25%
Induce abortion	14	17.5%
Previous MR	12	16.25%
Sub fertility	9	11.25%
IUCD insertion	9	11.25%
D&C	08	10%
LUCS	5	6.25%
Any pelvic surgery- Appendicectomy, ovarian cystectomy, tubal ligation.	3	3.75%
Endometriosis	2	2.5%
Previous ectopic pregnancy	1	1.25%

In table-4 shows contraceptive coverage where most of the patients (63.75%) of this study was without contraception; The following table is given below in detail:

Table-4: Contraceptive coverage. (n-80)

Contraceptive methods	No. of cases	Percentage
Without contraception	51	63.75%
Previous H/O IUCD insertion	13	16.25%
Oral pill	9	11.25%
Barrier	5	6.25%
Injectable	2	2.5%

In table-5 shows distribution of the patients according to symptoms where abdominal pain was common to all cases, 96.25%. The following table is given below in detail:

Table-5: Presenting symptoms of ectopic pregnancy. (n-80)

Symptoms	No. of cases	Percentage
Abdominal pain	77	96.25%
H/O Amenorrhea	63	78.75%
Per vaginal bleeding	43	53.75%
Shock	36	45%
Syncopal attack	17	21.25%
No H/O amenorrhoea	17	21.25%
Urinary problems	9	11.25%
Respiratory distress	4	5%

In this table-6 shows diagnostic aid for diagnosis of ectopic pregnancy. The investigations were done before undergoing Surgery. 26 out of 80 admitted patient pregnancy test was done 23 cases (88.46%) was positive & 3 case show false negative result. Ultrasonogram was done in 54 cases. USG detected ruptured ectopic pregnancy in 94.44% cases. Out of 19 cases, culdocentesis was found (+) in 9 cases only (47.36%). The following table is given below in detail:

Table-6: Diagnostic aid for diagnosis of ectopic pregnancy (n-80)

Types of investigation done	No. of cases	Positive Result	Percentage
Pregnancy test	26	23	88.46%
USG	54	51	94.44%
Culdocentesis	19	9	47.36%

In figure-1 shows Haemodynamic status with shock. Where 45% cases came with hypovolumic shock. The following figure is given below in detail:

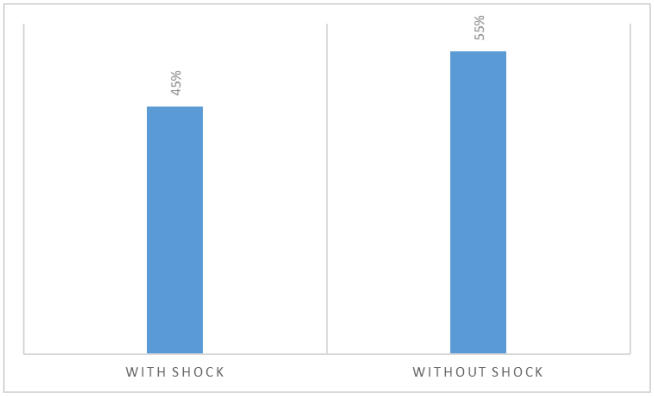

Fig-1: Haemodynamic status with shock (n-80).

In table-7 shows site of ectopic pregnancy where fallopian tube was affected 92.5% of cases & ampullary ectopic was most common (53.75%). The following table is given below in detail:

Table-7: Site of ectopic pregnancy. (n-80)

Site	No. of cases	Percentage
(i) Tubal		
Ampula	43	53.75%
Isthmus	17	21.25%
Fimbriated end	13	16.25%
Interstitial part	01	1.25%
(ii) Extra tubal		
Ovarian	3	3.75%
Cornual	2	2.5%
Abdominal	1	1.25%

Figure-2 shows tubal status at operation where most of the cases (77.5%) were ruptured. The following figure is given below in detail:

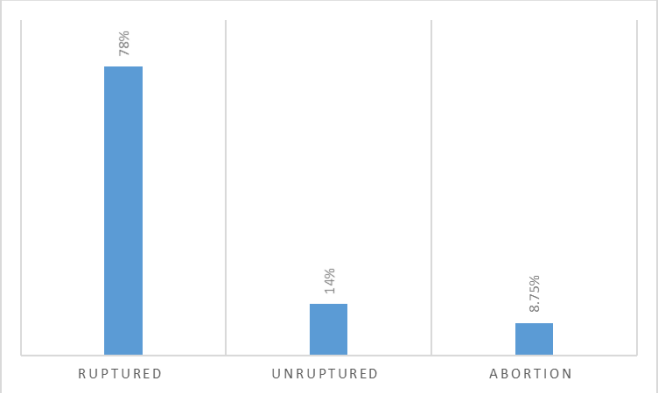

Fig-2: Tubal status at operation (n-80).

In table-8 shows condition of opposite ovary, tube & peritoneal cavity. (n-80). 58.75% cases show opposite sided tube & ovary was normal looking, whereas the tube was pathological in 36.25% cases.

Table-8: Condition of opposite ovary, tube & peritoneal cavity. (n-80)

Laparotomy findings	No. of patient	Percentage
Normal looking	47	58.75%
Unhealthy	29	36.25%
Blood in peritoneal cavity	65	81.25%

In table-9 shows during laparotomy, adhesion was found in 28.75% cases, Hydrosalphings in 3.75% and Endometriosis in 2.5% cases. The following table is given below in detail:

Table-9: Incidental pathology detected during laparotomy. (n-80).

Findings	No. of cases	Percentage
Adhesion	23	28.75%
Hydrosalphings	3	3.75%
Endometriosis	2	2.5%
Fibroid	2	2.5%
Ovarian tumour	1	1.25%

In table-10 shows types of operation performed where all cases were managed surgically. Salpingectomy with or without contralateral tubal ligation (85%) was the most common operation. The following table is given below in detail:

Table-10: Types of operation performed (n-80)

Types of operation	No. of cases	Percentage
Unilateral salpingectomy	49	61.25%
Unilateral salpingectomy with contralateral tubal ligation	19	23.75%
Salpingo-oophorectomy of affected side	9	11.25%
Removal of cornu & repair	2	2.5%
Removal of abdominal pregnancy	1	1.25%

DISCUSSION

Ectopic pregnancy may occur at any age during the reproductive period. In this study out of 80 patients 60 patients (75%) age was between 20-30 years. The youngest age group was <20 years, constitutes 3.75% and 17 patients were between the age of 31 to 45 years. In one study found 65% of cases were between the ages of 26-35 years [9].

In this study, the peak incidence (41.25%) of ectopic pregnancy was among the nulliparous. Another study has shown almost similar observation para-0 (39.5%) and para-1 (35.6%)[10].

In this series 63.75% patients do not take any contraceptive methods and 36.25% were under contraceptive coverage but somehow it fails. This indicates low coverage of contraceptive in our setting.

In this series the identifiable risk factor for ectopic pregnancy were mainly pelvic infection (26.25%), previous MR (16.25%), induced abortion (17.5%) and subfertility (11.25%) Less frequently there

was history of IUCD insertion, LUCS, D&C and pelvic surgery.

Subfertility is a risk factor for ectopic pregnancy in our country. History of subfertility was found 4.59% cases in a study done by one study [11]. Use of IUCD is another risk factor for ectopic pregnancy. Another study has found 17% cased had H/O IUCD insertion. But no patient had IUCD in situ when presented with ectopic pregnancy [12].

The presenting symptoms of ectopic pregnancy were analyzed 96.25% cases had lower abdominal pain, 78.75% had H/O Amenorrhoea, 53.75% had per vaginal bleeding, 21.25% gave history of syncopal attack and 45% cases was in hypovolumic shock [12].

Laparotomy was performed in all cases along with resuscitative measures and per operative findings were evaluated. At the time of operation 77.5% of ectopic pregnancy found rupture, 8.75% were aborted and 13.75% unruptured. One study has shown ruptured 74.86%, unruptured 4.47% & tubal abortion 12.85% cases. This picture reflects lack of health facilities in the community level and delay in the diagnosis and referral to tertiary level hospital [12].

In this study, tubal ectopic pregnancy was found in 92.50% cases, 3.75% ovarian, 2.5% cornual and 1.25% abdominal pregnancy. In case of tubal ectopic pregnancy, ampullary part was involved in 53.75% cases, 21.25% isthmic, 16.25% fimbrial and 1.25% interstitial pregnancy. Another study found ampullary 64%, isthmic 19%, fimbrial 12%, cornual 0.67%, rudimentary horn of bicornuate uterus 2% [13].

During laparotomy, condition of the opposite ovary, tube & peritoneal cavity was found normal looking in 58.75% cases and 36.25% cases were unhealthy. In 28.75% cases there was peritubal adhesion. Endometriotic deposit was found in 2.5% cases. There was hydrosalphings in 3.75% cases. Ovarian tumour & uterine fibroid was found in 1.25% cases of 2.5% cases respectively in their series.

After laparotomy, surgery appropriate for each case was performed and salpingectomy was more commonly performed as because the patients come to hospital at a later stage and with shock. Unilateral salpingectomy was done in 61.25% cases with contralateral tubectomy in 23.75% of cases as they were parous with completed family. Salpingo oophorectomy of the affected side was done in 11.25% cases as there were organized tubo-ovarian masses. In this study, there was one interstitial pregnancy having massive intraperitoneal haemorrhage. After removal of cornu, repair with proper haemostasis was done on affected side. There were two pregnancies in rudimentary horn of bicornuate uterus; one was about 20 weeks and another one about 16 weeks duration. Resection of the rudimentary horn was done in both cases and removal of abdominal pregnancy was done in one case.

Types of operation varied as revealed in different studies conducted by different persons. One study revealed unilateral salpingectomy in 71%, unilateral salpingectomy with contralateral tubectomy in 24% and resection of rudimentary horn of bicornuate uterus in 10% cases [14].

CONCLUSION

While mortality from ectopic pregnancy has dropped precipitously because of improved diagnostic and management techniques, it remains a significant gynecologic emergency. Delay in diagnosis or treatment can be catastrophic. Clinicians should be aware of the limitation of various investigations and maintain a high index of suspicion in mind about ectopic pregnancy. Prompt decision for active resuscitation and laparotomy would save the mother's life. Commonest presentations were lower abdominal pain, amenorrhea and P/V bleeding. The main risk factors were pelvic infection, H/O previous induced abortion/MR and history of sub fertility. Most of the cases were ruptured ectopic & presented late with hypovolumic shock. Laparotomy followed by salpingectomy is still the standard treatment in many cases.

REFERENCE

1. Kumar, P., Jeffcoate, S. N., & Malhotra, N. (2008). Jeffcoate's principles of gynaecology. Butterworths.
2. Garmel, S.H. (2002). "Early pregnancy risk" current Obstetrics and Gynaecologic diagnosis and treatment. 9th edition Dechernye AH & Nathan L, Lange Medical Book/Mcgrew Hill company, 272-285.
3. Sivasuriya, M. (1994). Ectopic pregnancy. In obstetrics and Gynaecology. Vol-2, 2nd edition. Chapter 30, Ratnam S.S, RAO K.B., Arul Kumaran S, India, Orent Longman 394-407.
4. Grudzinskas J.G. (1999). "Miscarriage, ectopic pregnancy and trophoblastic disease" Dewhurst's Text book of Obstetrics and Gyanecology for postgraduates. 6th edition, Edmods, Blackwell Science Ltd, 61-75.
5. Dutta, D.C. (2002). Haemorrhage in early pregnancy (Ectopic pregnancy); text book of obstetrics. 5th edition, new central Book Agency P. Ltd. 190-206.
6. Setting standards to improve women's health Royal college of Obstetricians and Gynecologists Management of Tubal pregnancy. (2004). RCOG Guideline, 21; 1-10.
7. Sadler, T.W. (2000). Ovulation to implantation, Biliminar germ disc, In: Langman's medical

embryology, 8th edition, chapter-2, 3, Baltimore, willams and wilkins, 31-40.
8. Caccitore, Tiitinen, A., & stenman, D.H. (1990). Normal early pregnancy: Serum HCG levels and vaginal ultrasound findings, Br, J Obstet. Gynaecol, 97; 899-903.
9. ICMR task force project. (1990). Multicentric case control study of ectopic pregnancy in India, J. obstet Gynaecol, India, 40; 425-430.
10. Ectopic pregnancy United States. (1995). 1990-1992. MMWR Morb Mortal WKly Rep, 44(3); 46-8.
11. Lawson, H.W., Atrash, H.K., Saftlas, A.F. (1989). Ectopic pregnancy in the United States, 1970-1986. MMWR CDC Surveill Summ, 38(2); 1-10.
12. Reece, E.A., Petrie, R.H., Sirmans, M.F. (1983). Combined intrauterine and extrauterine gestations: a review. Am J obstet Gynecol, (146(3): 323-30.
13. Hajeninius, P.J., Mol, B.W., Bossuyt, P.M., Ankum, W.M., Van, Der, veen, F. (2000). Intervention for tubal ectopic pregnancy. Cochranne Database System Rev, (2; CD 000324.
14. ANNE-MARIE, Lozeau, M.D., M.S., & Beth, Potter, M.D. (2005). Diagnosis and Management of Ectopic pregnancy, American family Physician, 72(9).