

Diagnostic Clues and Management of ectopic Pregnancy in Sir Salimullah Medical College and Mitford Hospital, Dhaka

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Abstract:

Background: Ectopic pregnancy is a common clinical condition. Diagnosis and management of this condition is necessary in due to day practice.

Methods: A cross sectional study on ectopic pregnancy was conducted in Sir Salimullah Medical College and Mitford Hospital (SSMC & MH) , Dhaka, with the objective to analyze the risk factors and assess the results of management with respect to maternal morbidity and mortality of ectopic pregnancy during the last two years.

Result: Fifty patients were admitted with ectopic pregnancy from 1st January 2008 to 31st December 2010. Frequency of ectopic pregnancy were 1.5% of total 3252 pregnancies. Risk factors were found in 45% of cases. Surgical treatment were performed in total 43 patients. There was one heterotrophic pregnancy and one case of abdominal pregnancy. Four patients were given intramuscular Methotrexate and two un-ruptured ectopics resolved spontaneously after by expectant management.

Conclusion: Conservative management was an option but surgical treatment was done more often because of late referrals. Screening of high risk cases, early diagnosis and early intervention would reduce the morbidity in ectopic pregnancies.

Introduction:

Ectopic pregnancy is a major health problem for women of child bearing age . Rupture ectopic pregnancy is the most serious gynaecological emergency due to internal haemorrhage, shock and sepsis. It is the leading cause of maternal morbidity and mortality. it accounts for 9% of all pregnancy related death¹. Since 1970, the frequency of ectopic pregnancy has increased six folds and presently it is seen in 2% of all pregnancies². The incidence of ectopic pregnancy has increased from 4.5/1000 in 1970 to 19.7/1000 in 1992³. This may be due to higher incidence of salpingitis, an increase in ovulation induction and tubal ligation. In a study it has been found that among 150 mothers who were brought dead in hospital, at least two were due to ruptured ectopic pregnancy⁴. In order to decrease maternal mortality and morbidity due to ectopic pregnancy, there is a need for early diagnosis. The availability of sensitive Beta hCG and high resolution sonography can make early diagnosis and reduce mortality rate⁵. The aim

of the study was to review the data of ectopic pregnancy during the last 2 years, analyze the risk factors and assess the result of management in correlation to morbidity and mortality.

Material and Methods:

This cross sectional study was carried out at the department of obs and gynae of SSMC and MH from 2008 to 2010. From all the admitted patients' only cases of ectopic pregnancy were included in the study. After formulation of aim of the study a clinical data sheet was made for recording all the information of the pregnant women. A verbal informed written consent was taken from each woman. After history taking, duration of gestational age was estimated from 1st day of L.M.P and early USG reports. Patient's presenting complaints namely duration of amenorrhoea, abdominal pain, per vaginal(p/v) bleeding, syncopal attack ,urinary problems were recorded . Presence of any risk factors like PID, H/O abortions or M.R. and any pelvic surgery specially

appendixectomy etc were looked for and recorded. For confirmation of the diagnosis serum ² hCG, Transvaginal sonography (TVS) was done and culdocentesis was performed in necessary cases. Plan of management of patient with ectopic pregnancy was decided according to the condition of patient. Emergency operation were planned and performed accordingly.

Result:

Among total 1200 admitted cases 60 patients presented with ectopic pregnancy. Finally analysis of data was possible for 50 patients. The frequency of ectopic pregnancy was 1.3%. Among them 30 patients presented with disturbed and 10 with unruptured ectopic and 10 patients had tubal abortion. Majority of patients (74%) were of age group of 21-30 years. Regarding parity ectopic pregnancy was found closely related to low parity i.e. para1 in 30% cases and only 10% had parity >4.

Table-I
Risk Factors (N=50)

Risk Factors	Frequency	Percentage
H/O abortion/MR	15	30%
H/O subfertility	5	10%
Pelvic infection	12	24%
H/O Appendicectomy	1	2%
H/O IUCD insertion	7	14%

Amongst the risk factors commonest was history of abortion & MR and pelvic infection (Table-I).

Table-II
Presenting symptoms

Symptoms	Number	Percentage
Abdominal pain	50	100
Period of amenorrhoea	38	76
P/V bleeding	25	50
Early pregnancy symptoms	21	42
Syncopal attack	22	44
Shock (collapse)	15	30

Commonest presenting symptoms were abdominal pain which was present in 100% cases, others in order of frequency were periods of amenorrhoea, p/v bleeding, syncopal attack (Table-II).

The most frequent physical findings were abdominal tenderness which was present in 100% cases,

cervical excitation was present in 84% cases and palpable adnexal mass was noted in 16% cases. On admission 32 patients were found severely anaemic and required blood transfusion.

Serum ² hCG was positive in all cases and ranged between 65.88- 18,843 mIU/ml. Urine hCG was performed in 40 patients. It was positive in 74% and negative in 26% cases. The size of ectopic mass on ultrasonogram ranged between 1.2 x 2.5 – 7.0 x 6.2 cm (mean 3.6 X 3.5 cm).

Table-III
Sites of ectopic pregnancy (N=50)

Sites	Number	Percentage
Isthmas	16	32%
Ampulla	26	52%
Interstitial part	06	12%
Abdominal	1	2%
Rudimentary horn of . bicornuate uterus	1	2%

In 96% cases ectopic was tubal ectopic pregnancy. Ampulla was the commonest site (52%), next was Isthmus (32%). Abdominal pregnancy and ectopic in rudimentary horn of bicornuate uterus occurred in 1 patient each (Table-III).

Table-IV
Types of interventions (N=50)

Types of interventions	Number	Percentage
Linear salphingostomy	07	15%
Unilateral salphingectomy	33	66 %
Others	10	10%

Among surgically treated patient 33(66%) had unilateral salpingectomy. Linear salphingostomy were done in 7(15%) patients. Tubal expression of ectopic gestation by milking of tube was done in one patient (Table-IV). Histopathological report confirmed ectopic pregnancy in all surgically treated patients.

Two patients were managed expectantly and successfully. She had an unruptured ectopic pregnancy with ² hCG level of 522lu/ml and gestational sac size 2.2 x1.5 cm. She was monitored by weekly serial ² hCG levels and usg done till ectopic pregnancy resolved. For medical treatment with single dose Methotrexate 50 mg/m² IM, four patients

were selected. All were primigravida and came within 9 weeks amenorrhoea. Amongst one patient was asymptomatic, diagnosed incidentally on USG, while the rest presented with bleeding per vaginum. Initial ² hCG levels of the patients ranged between 5937-7201 IU/ml and adnexal mass size 4.4x2.7- 4.6x3.9 cm. All patients showed declining ² hCG level, but one patient readmitted in emergency on 28th day of Methotrexate administration with acute abdomen and surgical intervention was required for the rupture ectopic pregnancy. The other patients remained well and their ectopic resolved completely after 48 days. Considering morbidity level there was no complications, patients who had expectant management. One patient had heterotrophic pregnancy and one had abdominal pregnancy. Both were treated by surgical management. Among the surgically treated patient, eleven patients had fever, five had UTI and one had wound infection. There was no mortality in this series.

Discussion:

This study was conducted on admitted patients of SSMC and MH who were diagnosed clinically as ectopic pregnancy. The frequency of ectopic pregnancy was 1.3%. The incidence of ectopic pregnancy varies greatly throughout the world ranging from 1 in 28 to 1 in 300⁶. In our country, unsafe abortion leading to PID is the main reason to occur ectopic pregnancy.

Ectopic pregnancy may occur at any age from menarchae to menopause. In present study 46% of the patients were in age group 21-25 years. The youngest age group patient was <20yrs constitutes 6% of the cases. Almost similar observations have been made Zabeen⁷, a study in Dhaka Medical College. Fernandes⁸ found that 65% patient ranged from 25-35 years, 6% were adolescents. Siddiqua & colleagues⁹ found 45% of their patients were between 25-35 years. General symptoms of ectopic pregnancy include the classical triad of pain, amenorrhoea and vaginal bleeding. In this series 100% presented with abdominal pain, 76% with period of amenorrhoea and 50% with p/v bleeding. Study findings are similar to the study findings of Nahar .K¹⁰ where 100% patient presented with abdominal pain, 70% with period of amenorrhoea and 50% with p/v bleeding. In another study Tancer et al¹¹ showed that 90% of patients had abdominal pain and 63.8% had abnormal vaginal bleeding. Siddiqua

& colleagues⁹ observed that 95% patients presented with abdominal pain, 65% period of amenorrhoea and 7% cases with irregular p/v bleeding in their study. In this study 46% patient gave the history of amenorrhoea of 6-8 weeks which is almost similar to other studies. of the study^{9,10}.

Infertility or subfertility is a risk factor for ectopic pregnancy. In the present study history of infertility was present in 10% of cases but the incidence was higher in the study of Siddiqua & colleagues⁹ which was 28%. History of previous induced abortion increase the risk of ectopic pregnancy 14 folds. In the current study 30% cases had previous history of menstrual regulation or abortion. In a study of Zabeen⁷ 48% cases had previous history of MR or abortion. Use of IUCD can place a woman at an increased risk of ectopic pregnancy. In this study 14% were IUCD users. Nahar¹⁰ observed 16% and Zabeen⁷ observed that 34% patient were IUCD users. Veldhuis et al¹² observed the incidence of ectopic pregnancy in IUCD users was 0.6 to 1.1% per year. Coste, J.et al² observed the rate of contraceptive failure (mostly IUCD failure) associated with ectopic pregnancy was 29%. The disparity may be due to the fact that in this study 40% of study population did not use any contraceptive method. The incidence of pelvic inflammatory disease (PID) has increased among the young women. Infection following induced abortion is the major cause of PID and the risk of ectopic pregnancy 10 times higher in areas with a high incidence of illegal abortion¹³ and 6 times higher following clinical salpingitis¹⁴. Several case control studies have reported a strong association between ectopic pregnancy and Chlamydia trachomatis infection^{15,16} and Gonococcal infection. Unfortunately samples of the present study were not screened for these organisms. In present study 24% patient had pelvic infection, similar findings (24%) was found by Nahar K¹⁰. Smith¹⁷ found 50% of women with ectopic pregnancy had a history of PID. Zabeen⁷ observed 48% patients had PID. The difference is due to many women having PID is asymptomatic so the actual number of patient suffering from PID is difficult to obtain. The mode of presentations of ectopic pregnancy may be acute, chronic or subacute. Acute presentation is usually associated with tubal rupture and massive intraperitoneal haemorrhage leading to acute abdominal pain and cardiovascular collapse. Siddiqua & colleagues⁹ observed 22% patients presented with collapse and Nahar¹⁰ found 60%

cases presented with collapse. This disparity may be due to early diagnosis of ectopic pregnancy before rupture. Collapse is due to hypovolemia and it depends upon amount of blood loss and previous haemoglobin status of the patient.

The chronic variety presents with localized tenderness and muscle guard in the lower abdomen, possibly with adnexal mass due to small amount of retroperitoneal bleeding as in tubal abortion and tubal mole. In this study 16% of the cases had palpable lump. Kumar¹⁸ reported that 92% of patients had combination of complex mass and positive beta hCG test. Zabeen⁹ found adnexal mass in 10% cases and Nahar¹⁰ found in 8% case. In this study abdominal tenderness was observed in 100% cases. The findings is almost similar to the study of Tancer,¹¹ and Zabeen⁷.

Tuomivara & colleagues¹⁹ reported cervical excitation test positive in 51% cases and abnormal uterine bleeding in 76% of their patients. In my study movement of the produced pain in 84% of cases and abnormal uterine bleeding in 50% cases. Similar result was found by Nahar¹⁰ and Zabeen⁷, cervical excitation test positive in 90% cases and abnormal uterine bleeding in 60% cases.

Ultrasound examination of the pelvis is widely used to evaluate clinically stable patients suspected of having ectopic pregnancy. In my study 76% was diagnosed by ultrasound. Zabeen⁷ had 92% ultrasonographically diagnosed case.

Ultra sound examination of pelvis is widely used to evaluate clinically stable patients suspected of having ectopic pregnancy. In my study 76% was diagnosed by ultrasound. Zabeen⁷ had 92% ultrasonographically diagnosed case.

Culdocentesis was performed when there was a suspicion of ectopic pregnancy. Positive culdocentesis was found in 76% cases. Zabeen⁷ found 84% positive cases.

Among all of my patients laparotomy was done with resuscitation measures (when needed) and per-operative findings were evaluated the time of operation, 96% cases tubal pregnancy was found among which 75% affected in right tube and 25% in the left side. Zabeen⁷ found 79% right sided tubal pregnancy and Nahar¹⁰ found 54% of right sided tubal ectopic pregnancy. During operation 62.5% of tubal ectopic pregnancy was found ruptured, 20.83%

unruptured and 16.6% were aborted. There was 2% of abdominal pregnancy. In a study, by Zabeen⁷ there was 74% ruptured, 4% unruptured and 20% aborted.

Sites of ectopic pregnancy were ampullary 52%, Isthmic 32%, interstitial 12%, rudimentary horn of a bicornuate uterus 2%. Almost similar observation has been made by Nahar¹⁰ and Zabeen⁷ in a local study. Siddiqua, Alam, Khan⁹ found ampullary 64%, isthmic 19%, fimbrial 12%, corneal 0.67% and rudimentary horns of bicornuate uterus 2%.

The other sided tube was examined and I found 75% cases of normal looking. In all cases tubes were found clinically pathological (i.e. inflamed, adhesion and hydrosalpinx). In my study there was no mortality from ectopic pregnancy during the study period.

Earlier and more accurate diagnosis has changed the optimum management of ectopic pregnancy towards more conservative. During laparotomy appropriate surgery for the cases were performed. Salpingectomy was more commonly performed as because the patients come to hospital at a later stage with shock.

In my study linear salpingostomy was done in 12% of cases as 20.83% of cases are present with unruptured ectopic pregnancy. Unilateral salpingectomy was done in 58% of cases. Salpingectomy with contralateral tubectomy in 18% cases, salpingo-oophorectomy in 8% cases. Other operations like resection of bicornuate uterus and total abdominal hysterectomy was done in 4% of cases.

Types of operation varied as revealed in different studies conducted by different workers. A study by Zabeen⁷ reported that salpingectomy with contralateral tubectomy in 46%, salpingectomy in 52% cases. The study result Siddiqua, Alam, Khan⁹ showed unilateral salpingectomy in 71%, unilateral salpingectomy with other sided tubectomy in 24% and resection of rudimentary horn of bicornuate uterus in 10% cases.

Here I must have to mention that there was no post operative complication.

Conclusion:

The incidence of ectopic pregnancy appears to be comparatively high in our community. Pelvic inflammatory disease being the important risk factor. The risk factors should be more clearly defined by

nationwide large scale multi-centric study, so that measures can be taken to reduce or prevent the incidence. Such as Chlamydia trachomatis serology should be a routine investigation protocol in all cases of ectopic pregnancy.

In our country early diagnosis of ectopic pregnancy before rupture was very difficult because most of the patients came from remote area with low socioeconomic condition. They are illiterate, non compliant and not conscious about their health status and early diagnostic facilities are not available in remote area. So there is little role MTX therapy in my study population. So management option is limited to laparotomy followed by salpingectomy which is still the standard treatment in many cases.

Better diagnostic facilities should be made available in remote area of our country to diagnose the case at an early stage and only when we can diagnose an ectopic pregnancy at early stage we will be able to treat these patients in such a way, that there will be maximum fertility and minimum risk for a future ectopic pregnancy.

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