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A Clinical Study on Ectopic Pregnancy in RIMS from 2013 June-2015 July

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Abstract:
Background: *Ruptured ectopic pregnancy is an acute emergency condition, and associated with maternal mortality and morbidity especially in the developing countries.*
Objective: *The aim of this study was to determine and evaluate the incidence, clinical presentation, risk factors, and management outcomes of ectopic pregnancies at Regional Institute of Medical Sciences (RIMS), Imphal, Manipur.*
Methods: *This was a retroprospective, cross sectional study of ectopic pregnancies managed in RIMS during the study period (June 1, 2013 to JULY 31, 2015). The medical records of the patients managed for ectopic pregnancy as well as the total birth record and gynaecological admission records during the period under was reviewed, and data were collected . There were 13,863 patients in Gynaecological Outpatient attendance, out of which 6200 Gynaecology patients were admitted, and there were 80 cases of ectopic pregnancies in which 38(48%) presented as ectopic rupture in shock, 42(52%), presented as early diagnosis, either with ultrasonography or clinical findings.*
Results: *Ectopic pregnancy constituted 1.2% of all gynecological admissions, and its incidence was 1-2%. The commonest age group of the patients was 25-35 years. 38(48%) patients presented in emergency with rupture ectopic in shock. 42(52%) patients were admitted, on the basis of early diagnosis, with incidental ultrasonography finding, or due to any of the mentioned symtoms, and confirmed on ultrasound.*
The commonest (80.0%) clinical presentation was abdominal pain, and the commonest (29%) identified risk factor was a previous history of sexually transmitted diseases confirmed as pelvic inflammatory condition or others. No death due to ectopic pregnancy was found during the study period.
Conclusion: *Ruptured ectopic pregnancy is of profound threat to the well being of the women, and if undiagnosed early, is the major cause of maternal morbidity and mortality, and has remained a reproductive health challenge in developing countries.*
Keywords: *ectopic, emergency, pregnancy, life-threatening*

I. Introduction

Undiagnosed ectopic pregnancy, with the presence of fetal cardiac activity is like an impending time bomb which may rupture any time,putting the well being of the patient in utmost danger. Ruptured ectopic pregnancy is a life threatening condition and has to be managed urgently, as there is increased risk of mortality, due to delay in judgement and management. An ectopic or extrauterine pregnancy is one in which, the blastocyst implants anywhere other than the endometrial lining of the uterine cavity. They account for 1-2% of reported pregnancies. The rate of ectopic pregnancies is rising due to increasing incidence of sexually transmitted diseases, diagnostic tools with improved sensitivity, delayed marriages, delayed childbearing, ovulation inducing drugs, use of IVF. Hypovolemic shock from preoperative and intraoperative bleeding is one potential problem for these patients that requires close postoperative monitoring.[1-5]

It is a condition of immense gynaecological importance, particularly in the developing world, because of the high morbidity and mortality associated with it, and the enormous threat to life. When ruptured, ectopic pregnancy is a true medical emergency. It is the leading cause of maternal mortality in the first trimester and accounts for 10%–15% of all maternal deaths. Doctors should be ectopic minded, to avoid delay in prompt intervention. It is a condition which cannot be ignored, and pose a huge hurdle if intervention is delayed or misdiagnosed.[2-7]

The classic clinical triad of ectopic pregnancy is pain, amenorrhea, and vaginal bleeding; unfortunately, only about 50% of patients present with all 3 symptoms. About 40-50% of patients with an ectopic pregnancy present with vaginal bleeding, 50% have a palpable adnexal mass, and 75% may have abdominal tenderness. In one case series of ectopic pregnancies, abdominal pain presented in 98.6% of patients, amenorrhea in 74.1% of them, and irregular vaginal bleeding in 56.4% of patients.[9-11]

These symptoms overlap with those of spontaneous abortion; a prospective, consecutive case series found no statistically significant differences in the presenting symptoms of patients with unruptured ectopic pregnancies versus those with intrauterine pregnancies, and thus pose a confusing picture in prompt diagnose.[4-8]

II. Materials And Methods:

A retrospective cross sectional study of those patients who presented in RIMS, either in emergency or OPD with diagnosis of ectopic pregnancy on clinical examination, or ultrasonography or laboratory findings, from 2013 June- 2015 July

III. Results And Observations:

A total of 80 ectopic pregnancies were recorded in the 2 year study of ectopic pregnancies, presenting either in OPD, with ultrasonography finding, or in emergency .Thirty eight patients presented in emergency with rupture ectopic in shock. Forty two patients were admitted, on the basis of early diagnosis, with incidental ultrasonography finding, or due to any of the mentioned symtoms, and confirmed on ultrasound. 55 patients underwent operative intervention, 22 patients had medical therapy, and 2 had expectant management.

Criteria for surgical therapy taken were:

1. Cardiac activity present.
2. Beta hcg >5000 IU/L
3. Hemodynamically unstable
4. Ectopic mass size >3.5 cm

Criteia for Medical therapy taken were:

1. Hemodynamically stable
2. Cardiac activity absent
3. Beta hcg< 5000 IU/L
4. Ectopic mass size<3.5 cm

Criteria for expectant management for 2 cases:

1. Beta hcg <200 IU/L
2. Size 1*1 cm

The commonest clinical presentation was abdominal pain, and the commonest cause was the history of Pelvic inflammatory disease.

During our study it was found that, ectopic pregnancy was maximum in the age group of 25-35 yrs(58.75%),and maximum in nullipara(26%), followed by para 1(25%). 81% were married,46% were farmer by occupation, and 31% were housewives. Table 3 shows that ,maximum (52%) patients presented with abdominal pain, followed by 25% in shock. Table 4 shows that ampulla was the most common site of rupture(48%), and isthmus was 29%. The most common time of rupture was at less than 7 weeks of ectopic pregnancy(55%), and cornual end had the longest duration of pregnancy of >12 weeks(15%). Table 5. Shows that pelvic inflammatory disease was the most common etiology for ectopic pregnancy(29%), followed by intake of ovulation inducing drugs(25%), and history of induced abortion(23%). Table 6 shows that confirmation of ectopic pregnancy (51%) was by clinical diagnosis, and by pregnancy tests, and 49% was by ultrasonography. Table 7 shows that 48 % were ruptured at presentation in the hospital, 30% unruptured ectopic, and 22 % showed tubo-ovarian complex. Table 8 shows that, 94% went for unilateral salphingectomy, 4% for salphingo-oophorectomy, and 2% for hysterectomy. In medical treatment, as staed in table 9, 56% went for medical therapy with Injection methotrexate- multidose therapy, and 32% with single dose therapy, 12% went for conservative treatment.

Bio-demographic characteristics of patients with ectopic gestation

Age (years)	**Number (n = 80)**	**Percentage**
Less than 20	6	7.5
20–24	12	15
25–39	22	27.5
30–35	25	31.25
36- 40	8	10
41 and above	8	10
Parity		
0	21	26.25
1	20	25
2	16	20
3	10	12.5
4	7	8.75
5 and above	6	7.5
Marital status		
Married	65	81.25
Single	15	18.75
Occupation		
Farmer	37	46.25

Hairdresser	02	2.5
Trader	8	10
Civil servant	03	3.75
Student	5	6.25
Housewife	25	31.25

Table 2 Clinical presentation of patients with ectopic pregnancy

Presentation	**Number**	**Percentage**
Abdominal pain	42	52.5
Amenorrhea	8	10.0
Vaginal bleeding	5	6.25
Fainting attack	5	6.25
Shock	20	25

Table 3 Site of ectopic pregnancy and gestational age at rupture

Number	**Percentage**	
Site of both	**ruptured and unruptured**	
Ampulla	14(37%)	20(48%)
Isthmus	13(34%)	12(29%)
Interstitial/cornual	8 (21%)	6(14%)
Tubo-ovarian	2 (5%)	1(3%)
Abdominal	0 (0%)	1(3%)
Cervical	1(3%)	2(5%)

Gestational age (weeks)	**7 n (%)**	**8–12 n (%)**	**>12 n (%)**	**Total n(%)**
Gestational age at rupture for specific sites				
Site of rupture :				
Cervical	1 (3%)	0(0%)	0 (0 %)	1 (2.6%)
Ampulla	7 (18.4%)	7 (18.4%)	0 (0%)	14 (36.8%)
Isthmus	13(34.2%)	0 (0)	0 (0)	13 (34.2%)
Cornual	0 (0)	2 (5.26%)	6	8 (21.08%)
Ovarian	2(5.26%)	0(0%)	(15.78%) 0(0%)	2(5.26%)
Total	21 (55%)	9 (23.68%)	6 (15.78%)	38 (100%)

Table 5 Risk factors found in patients with ectopic pregnancy

Risk factor	**Number**	**Percentage**
Previous induced abortion	12	23%
Pelvic inflammatory disease	23	29%
Intake of ovulation inducing drugs	20	25%
IVF	7	8%
Previous spontaneous abortion	7	8%
Previous ectopic	3	3%
Idiopathic	3	3%

Table 6 Diagnostic methods

Method	**Number**	**%**
Clinical/abdominal		
Pregnancy test	41	51.25%
Ultrasound	39	48.75%
Laparoscpy	0	0

Table 7 Operative findings

Findings	**Number**	**Percentage**
Ruptured	38	47.5%
Unruptured	24	30%
Tubo-ovarian complex	18	22.5%

Table 8 Type of surgical treatment

Surgery	**Number**	**Percentage**
Salpingectomy	52	94.5%
Hysterectomy	1	1.81%

Salpingo-oophorectomy	2	3.63%

Table 9 Type of medical treatment

Treatment	Number	Percentage
Inj Methotrexate (0.1 mg/kg body weight) Single Dose Therapy	08	32%
Multi-Drug Therapy	14	56%
Expectant Treatment	3	12%

IV. Discussion:

Ruptured ectopic pregnancy is an acute emergency, and the patient has to be taken for surgical intervention. As is the golden saying, it's better to go forward with exploratory laparatomy or laparoscopy when in doubt, than not to intervene, and lose a patient, more so developing countries where resources are limited . The incidence of ectopic pregnancy found in our center during the study period was 1.2%; this was consistent with the 1-2% reported in United Kingdom.[4-8]

It was similar to 1.2% and 1.02% reported in Ife and Ilorin respectively. The incidence in our study was comparable to 1.98% from a previous study in Abakaliki in 2003.[9]

The incidence of ectopic pregnancy was found to be highest in the 25-35(58.75%) year age group, due to higher incidence of PID, and use of ovulation inducing drugs, and increased incidence of history of induced abortion. The highest incidence of ectopic pregnancy was noted amongst nulliparous women, which was analogous to various aforementioned studies.The increasing rate in early diagnosis and intervention of ectopic pregnancy, is due to increased awareness of ectopic pregnancy and its clinical presentation, enhanced by the development of specialized early pregnancy units.[10-14]

The patients presenting in emergency with rupture ectopic were in shock, having hypotension, tachycardia, and rebound tenderness, and were taken in for emergency laparotomy. Many patients also presented with unruptured ectopic, and were admitted on the basis of pregnancy tests, high clinical suspicion, confirmed by tranvaginal sonography, and serum beta HCG.[15-17]

The commonest site of ectopic pregnancy from our findings was the ampullary region(48%), of the fallopian tube, which has also been reported as the commonest site by other studies. Due to the fact that many ectopic pregnancies resolve spontaneously, some cases of asymptomatic ectopic pregnancies in compliant patients was also managed expectantly as the β-hCG titer is low (<200 mIU/mL). Patients on medical and expectant management were followed up and were stable till date.[18-20]

Ruptured ectopic pregnancy is an acute emergency in which the patent is compromised, due to massive blood loss, immediate surgery alongside resuscitation, hand in hand, is lifesaving. Immediate resuscitation with intravenous fluid and blood, emergency laparotomy with salpingectomy, and conservation of the ovaries if possible, was done for the majority of our patients.[3-6]

Salpingectomy(94.5%), was the commonest emergency procedure performed in our institution, as ruptured ectopic pregnancies was associated with massive hemoperitoneum. In developing countries like India with limited facilities, surgical intervention remains the basic mainstay, in the line of treatment of ectopic pregnancy. The overall goal of management of ectopic pregnancy is to preserve the life of the mother.[20-25]

V. Conclusion:

Ectopic Pregnancy occurs when implantation of the fertilized egg occurs outside the uterus. The estimated prevalence of ectopic pregnancy is 1-2% worldwide. In RIMS, the incidence of ectopic pregnancy was 1.2%. In the United Kingdom nearly 12 000 ectopic pregnancies are diagnosed each year, which gives a prevalence of 1.1%. Serious adverse outcomes in ectopic pregnancies are typically caused by delayed diagnosis; this highlights the need for primary care and secondary care health professionals to be familiar with the risk factors for ectopic pregnancy, its clinical symptoms, and the local facilities that provide care for women with early pregnancy problems. The burden of disease is high owing to the cost of diagnostic tests and expensive treatment. Ectopic pregnancy should be considered in all pregnant women, presenting with abdominal pain or vaginal bleeding. Nowadays, due to better diagnosed facilities, the diagnosis of ectopic pregnancies is rising but mortality is decreasing, due to early intervention.

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