IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 14, Issue 2 Ver. II (Feb. 2015), PP 38-41
www.iosrjournals.org

Analysis Of Hundred Cases Of Ectopic Pregnancy In A Tertiary Care Hospital Of North Coastal Andhra Pradesh, Visakhapatnam India

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Abstract:
Background: *Ectopic pregnancy is a pregnancy in which the fertilized ovum implants at a site other than the normal uterine cavity. Ruptured ectopic pregnancy is the leading cause of maternal mortality in the first trimester .The rise in the incidence of ectopic pregnancy is partly due to increase in risk factors like tubal and pelvic surgeries ,pelvic inflammatory disease ,infertility treatments and increase in sexual promiscuity .*
Objectives:
1. To study the reproductive characteristics of study population.
2. To study the symptomatology and risk factors associated with ectopic pregnancy.
3. To study the treatment modalities and postoperative complications.
Methodology: *A hospital based study was conducted among 100 patients with ectopic pregnancy in a tertiary care hospital. Study variables included age, clinical features, risk factors, diagnostic methods and management modalities.*
Results: *Among 100 patients with ectopic pregnancy, 39% occurred in 21-25yr. age group, para I-III were most effected (78%),86% were of low socio economic group. Common risk factors noted were pelvic surgeries(46%), abortions(17%), infertility(6%). Common symptoms present were amenorrhea(91%), abdominal pain(89%), vaginal bleeding(60%). Urinary pregnancy test predicted the pregnancy status in all cases. Ultrasound accurately predicted ectopic in 29 cases. Ampulla(63%) and Isthmus(16%) were the common sites .Rupture of ectopic was noted in 86% cases and salpingectomy was done in 76 cases.60 cases needed blood transfusion.*
Conclusion: *Ectopic pregnancy continues to be one of the important obstetric emergencies. If the condition is suspected, one should make a provisional diagnosis on clinical grounds which on further work up may be sustained or eliminated. Immediate resuscitation, blood transfusion facilities ,emergency anesthetic support, adequate surgery go a long way in reducing morbidity and mortality in ruptured ectopic pregnancies.*
Keywords: *ectopic pregnancy, obstetric emergency, pelvic inflammatory disease, total salpingectomy.*

I. Introduction

Ectopic pregnancy is a pregnancy in which the fertilized ovum implants at a site other than the normal uterine cavity(1). 95% of ectopic pregnancies occur in fallopian tubes(2).Other sites are cornua, broad ligament, ovary, cervix and abdominal cavity. As none of these sites can accommodate the growing embryo or placenta, potential for rupture and hemorrhage always exists. Ruptured ectopic is a true medical emergency. Ruptured ectopic pregnancy is the leading cause of maternal mortality in the first trimester and accounts for 10-15% of all maternal deaths (3).The rise in incidence is attributed partly to increase in risk factors like pelvic inflammatory disease, tubal and pelvic surgeries , infertility, exposure to sex at an early age .Availability of sensitive urinary pregnancy tests and ultrasound significantly helped to pickup cases of early unruptured ectopic pregnancies(4). Having a high index of clinical suspicion, managing the patient at the earliest it is possible to improve the prognosis so far as morbidity, mortality and fertility are concerned. Hence an attempt was made to study the reproductive characteristics, symptoms and risk factors associated with ectopic pregnancy and the treatment modalities and post operative complications among study population.

II. Methodology

A hospital based retrospective study was conducted in Obstetrics and Gynecology department of King George Hospital, Visakhapatnam a Tertiary Care Hospital For North Coastal Districts of Andhra Pradesh. Study population included 100 patients with ectopic pregnancy admitted in Obstetrics and Gynecology Department. Study variables were Age, parity, clinical features, risk factors, diagnostic methods and management modalities etc. Data was analysed manually and relevant statistical tests were applied.

III. Results

In the present study, 10%were of 16-20 yrs age group,39% were of 21-25 yrs age,34% were in 26-30 yrs group.9% were of 31-35yrs group and 6% were in above 35 yrs age group.

Among all the patients 22% were uniparous women, 42% were para II and 19% were para III and above and the rest (17%)were nulliparous. On further analysis it was observed that among 17 nulliparous women, 10 had no conceptions before, 4 had previous history of abortions and 3 had previous ectopic pregnancies.

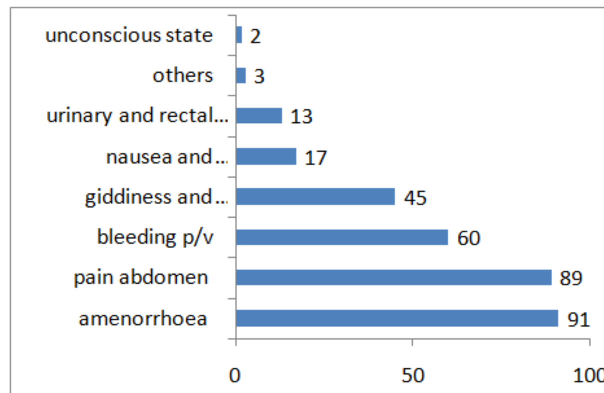

Fig 1: Distribution of various symptoms among study population (%).

Amenorrhea (91%), abdominal pain (89%), bleeding per vaginum (60%) were the most common symptoms followed by giddiness & fainting(45%),nausea and vomiting(17%).

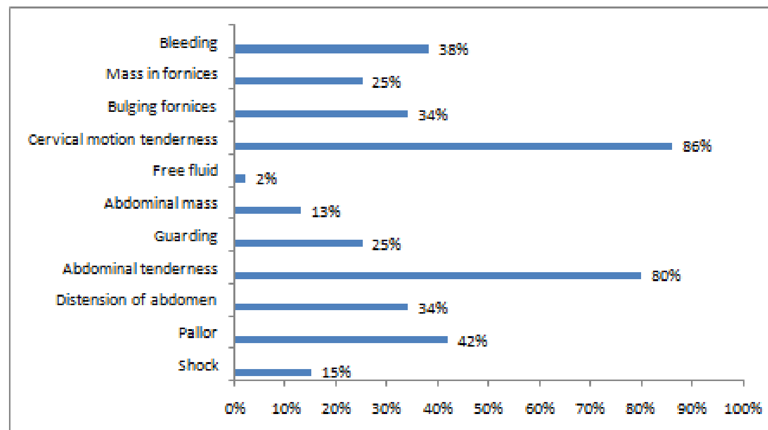

Fig 2: Distribution of signs among the study population.

In the present study ,Abdominal tenderness (80%), cervical motion tenderness (86%), pallor (42%), distension of abdomen (34%), bleeding (38%), mass in fornices (25%), guarding (25%), abdominal mass (13%),shock (15%) and free fluid were the signs noted.

Risk factors : In the study group,46% had history of previous abdominal surgery i.e., either tubectomy, caesarean section or previous tubal surgeries. History of pelvic inflammatory disease was reported among 19% of women and 3% had previous ectopic pregnancy.

Table 1: Various sites of ectopic pregnancy.

Previous pelvic surgeries	Tubectomy	27%	46%
	Caesarean sections	13%	
	Previous Tubal Surgeries	4%	
	Others	2%	
Infertility & treated for infertility		6%	
Previous abortions		17%	
Pelvic Inflammatory disease		19%	
Previous ectopics		3%	
IUCD insitu		1%	

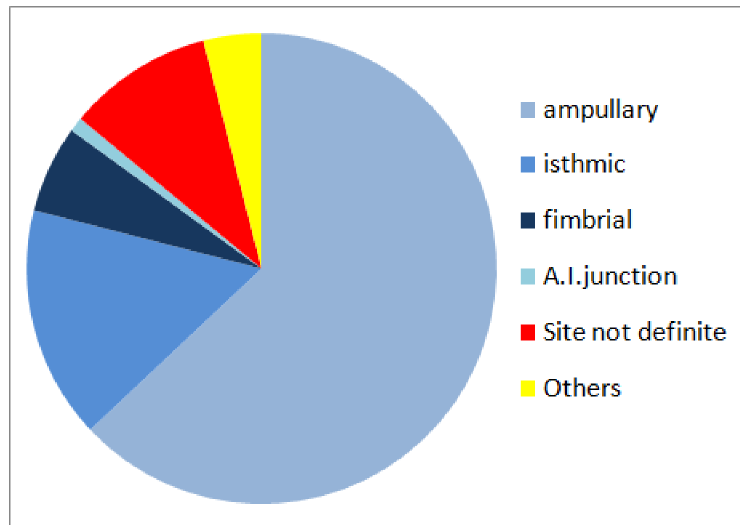

Fig3: Various sites of ectopic pregnancies.

As shown in the above figure majority were tubal pregnancies (87%) of which nearly two-thirds were ampullary and 16% were isthmic.

In the current study, Ruptured ectopics were reported 86%,tubal abortions were 3% and unruptured ectopics were 5%.

Diagnostic methods:

Urinary H.C.G. test was positive in all the cases. Definite diagnosis of ectopic pregnancy could be made by ultrasound in 29 of 34 cases and adenexal mass was made out in 3 cases; ultrasound impression was that of an incomplete abortion in 1 case and ovarian cyst in an another case. Paracentesis was done in 46 cases of suspected tubal rupture of which 42 cases were positive for free blood.

Management and post op complications:

Surgical procedures employed in the management: Out of 100 cases, total salpingectomy was done in 56cases and 19 were managed by partial salpingectomy. Salpingostomy was done in 3 cases, salpingo-oophorectomy was done in 10cases milking was done in 2 cases.

Medical management by methotexate was successful in 3 cases and resection of rudimentary horn, hysterectomy and laparotomy removal of fetus and placenta were the procedures done in rudimentary horn pregnancy, cornual and secondary abdominal pregnancy respectively.

In 28% of cases ,blood transfusions were given, auto transfusion was given in 20% of cases and in another 12 cases both auto and compatible blood transfusions were given.

Postoperative pyrexia occurred in 22 cases, 4 cases were complicated by sepsis and paralytic ileus was noted in 4 cases.

IV. Discussion

In our study, 39% of cases belonged to 21-25year age group followed by 26-30year group constituting 34% of cases. Similar results were reported by Samia Mufty et al.(5) and Shivakumar HC et al(6) where in their study nearly one third were in the age group of 21-25years. In our study, majority were of parity $\geq$2(58%).Most of them have undergone tubal sterilization which may be an independent risk factor for ectopic pregnancy. This finding was also supported by several authors(5,6). Ectopic pregnancy should be considered in all women after tubal ligation who present with signs and symptoms of pregnancy.

In the present study, other predominant risk factors were abortions (17%) and pelvic inflammatory disease (19%). Samia Mufti et al(5) and Shraddha Shetty et al(7) reported similar risk factors in their study. Priti (9) reported abortions in 21% of ectopics. According to Ashermann, intrauterine manipulations like curettage, dilatation of cervix done during induced abortions can cause subclinical pelvic inflammation, which may hamper the migration of fertilized ovum leading to ectopic pregnancy.

Classic triad of ectopic pregnancy amenorrhoea, abdominal pain and bleeding pain were present in more than 70% of cases. Abdominal distension, abdominal tenderness, pallor and cervical motion tenderness were the common signs present. Shraddha Shetty K et al(7) and Shivkumar HC et al (6) reported the same findings in their study. Amenorrhea, pain abdomen are the symptoms which should alert the obstetrician to confirm the site of pregnancy in all women tested positive for pregnancy to avoid catastrophic ruptures. Absence

of amenorrhea also cannot rule out ectopic as suboptimal levels of H.C.G. in ectopic pregnancy can lead to bleeding per vaginum.

The commonest site of ectopic in the present study was ampulla(63%), followed by isthmic (16%), fimbrial (6%). Shraddha et al's(7) findings were concurrent with this study.

Ruptured ectopics were reported high (86%) in our study as compared to studies done by Shraddha Shetty K et al (61.3%) and Samia Mufti et al (60.52%). Ruptured ectopics constitute a real emergency as these are often associated with massive abdominal haemorrhage leading to shock. These cases are often associated with high maternal morbidity and mortality. Early detection prior to rupture can prevent morbidity and conservative procedures like milking , salpingostomy and medical treatment with methotrexate can preserve fertility especially in nulliparous and uniparous women who desire childbearing. In the current study most common surgeries performed were total salpingectomy (56%),partial salpingectomy(19%), Samia Mufti et al(5) reported total salpingectomy in 65.78% cases, partial salpingectomy in 8.7% cases. Salpingostomy was done in 2 cases in the present study where as Samia Mufti et al(5) reported 21.05% of cases treated with salpingostomy. Higher rate of conservative surgery in their cases might be due to higher number of unruptured ectopics in their study(35.08%) compared to 5% in the present study.

V. Conclusions

Ectopic pregnancy continues to be one of the important obstetric emergencies. Proper history and a thorough physical examination remain the foundation for initiating appropriate workup that results in accurate and timely diagnosis of ectopic pregnancy. As ectopic is a great mimicker of many acute abdominal conditions and poses a grave risk to the life, if the condition is suspected, one should make a provisional diagnosis on clinical grounds which on further workup may be sustained or eliminated. Modern anesthesia, blood transfusion facilities, immediate resuscitation and adequate proper surgery are the keystones in reducing the morbidity and mortality in ruptured ectopic pregnancies.

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