Original Article

Unruptured Ectopic Pregnancy is Still Uncommon in Our Setup

1. Razia Bahadur Khero 2. Safia Maqsood 3. Kauser Jillani 4. Khairunnisa Memon

1. Asstt. Prof. of OBGYN 2. Asstt. Prof. of OBGYN 3. Asstt. Prof. of OBGYN 4. Prof. of OBGYN, PUMHS Nawabshah

ABSTRACT

Objective: To analyze the frequency of ectopic pregnancy, treatment modalities, maternal outcome and why the unruptured ectopic pregnancy is presented less frequently in our set up.

Study Design: Cross sectional descriptive study.

Setting and Duration: This study was conducted at the Department of OBGYN PUMHS Nawabshah from January 2008 to December 2010.

Materials and Methods: All the patients who have a clinical suspicion for ectopic pregnancy or diagnosed by ultrasonography included in the study. Verbal interviews were taken in the post operative period for assessment of educational and socio economic status of patient along with the behavior of the referring authority. Patients' records were reviewed for clinico surgical finding and maternal outcome.

Results: Eighty eight (88) women were presented with ectopic pregnancy out of 13286 deliveries at PUMHS Hospital Nawabshah during 03 years study period making a frequency of 0.66%. No risk factor identified in 58(65.9%) of cases. 56(63.63%) patients presented in acute way. Regarding treatment modalities 86(97.72%) patients underwent laparotomy amongst them salpingectomy was performed in 50(56.81%), salpingo-oophorectomy in 28(31.81%), milking of tube were carried out in 03(3.40%) patients and complete tubal abortion was found in 05(5.86%) patients. 02 patients with unruptured ectopic pregnancy were selected for medical treatment, 01 was successful and other failed and treated by salpingectomy. Maternal outcome was satisfactory; no maternal death was found in the study group. Blood transfusion was required in 100% of patients (1-4 pints).

Regarding the aspect of why we are not receiving the patients with unruptured ectopic pregnancy, we found that > 90% of our patients belong to poor socioeconomic group and uneducated. Remaining patients belong to middle social class and were able to write their name. We found it an important factor in starting late antenatal care. We also assessed the behavior of referring authority as well as in our out- patient department; urine for the P.T was the preferable method of diagnosing first trimester pregnancy. Ultrasound was only advocated once patients presented with acute symptoms of ectopic pregnancy.

Conclusion: The detection of unruptured ectopic pregnancy is almost nil in our setup due to late reporting to hospital by women when pregnant and inability of the health care providers to suspect it when faced with early pregnancy problems of lower abdominal pain and irregular vaginal bleeding. A change in the health professional behavior, provision of β HCG estimation and transvaginal ultrasound in public sector hospitals are the modalities to improve the detection of unruptured ectopic pregnancy.

Key Words: Ectopic pregnancy, unruptured, detection, behavior of care providers, health education.

INTRODUCTION

Ectopic pregnancy is an implantation of fertilized ovum at sites other than normal endometrial cavity[1]. It is a potentially life and fertility threatening complication of pregnancy, need an urgent intervention to save the maternal life.

Its incidence is increasing worldwide, most probably due to advanced diagnostic modalities[2,3,4,5] increasing incidence of PID[6] and increase use of fertility assisted techniques[6,7]. In developing countries the incidence varies from 1 in 44 deliveries to 1 in 22 deliveries[8], while in developed countries it varies between 1:233 to 1:280 deliveries[9].

In Pakistan the incidence varies between1:112 to 1:130 pregnancies[10], but the real figure could be much higher due to poverty, lack of health education, under reporting and poor communicating setup between the health care providers. The ultimate result is the late presentation of the patient and radical surgeries with significant impairment of women fertility and increase risk of future ectopic pregnancy.

Fallopian tube is the site of involvement in > 95% cases, rarely there is involvement of ovary, broad ligament, uterine cornu, cervix and the pelvic cavity[7,11]. Heterotropic pregnancy, although rare in spontaneous conception (1:25000--30000) can be seen up to 3% of pregnancies resulted from assisted reproduction[1,6,7].

Despite the relatively high frequency of ectopic pregnancy, clinical diagnoses can be challenging due to varied clinical presentation(70-80% with sub acute and <25% with acute ruptured ectopic pregnancy). A high index of clinical suspicion, transvaginal ultrasonography, serial β-HCG assessment and laparoscopy play a vital role in the diagnosis of ectopic pregnancy. In developed countries, use of advanced

modalities results in detection rate of unruptured ectopic pregnancy up to 88-100%[2,3] which is extremely important in preserving woman's fertility.

Management options for ectopic pregnancy range from clinical observation, methotrexate to conservative and radical surgeries. Inspite of increasing incidence, case fatality rate from ectopic pregnancy is decreasing by 90% from 1979 to 1992 but still it is a leading cause of maternal mortality in first trimester of pregnancy, with a mortality rate of 9-14%[7,10,11].

Advances in the management of ectopic pregnancy are now focuses not only on saving the maternal life but also save the woman fertility and minimize the risk of future ectopic.

This study was conducted in the Department of OBGYN at PUMHS Hospital Nawabshah to evaluate:

1) The frequency of ectopic pregnancy.
2) Clinical presentation, treatment modalities and maternal outcome.
3) Why the detection rate of unruptured ectopic pregnancy is uncommon in our setup.

MATERIALS AND METHODS

A cross sectional descriptive study was conducted in the Department of OBGYN at PUMHS Nawabshah during three years period from January 2008 to December 2010.

All the patients who had a clinical suspicion for ectopic pregnancy or diagnosed by ultrasonography included in the study. Written informed consent was taken. The information recorded on a proforma including age, parity, presenting symptoms, associated risk factors, complete clinical examination, awareness of pregnancy, socioeconomic and educational status of patient, referring health facility and management strategy.

According to set inclusion criteria, patients who were stable and diagnosed as unruptured ectopic pregnancy received medical treatment (methotrexate). Patients presented with acute abdomen and hypovolumic shock were immediately resuscitated and treated by laparotomy. salpingectomy and salpingo-oophorectomy were the preferred approach, mostly due to bad tubal rupture and formation of tubo ovarian masses.

Outcome measured were frequency of ectopic pregnancy out of total number of deliveries, maternal outcome and why the detection rate of unruptured ectopic pregnancy is uncommon in our setup.

RESULTS

Eighty eight women were presented with ectopic pregnancy out of 13286 deliveries at PUMHS hospital Nawabshah during 03 years study period making a proportion of 0.66%.

Mean age of women was 27.30±5.86, while the range was from 15 to 42 years. Mean parity was 3.05±1.76; minimum parity was 0 while 06 was maximum parity. No risk factor identified in 65.90% patients. Risk factor identified were PID in 08(9.09%), infertility in 07 (7.9%), previous pelvic surgeries in 06(6.8%), ovulation induction in 05(5.68%), IUCD in 02(2.27%) and previous history of ectopic pregnancy in 02(2.27%) women. Majority of patients (63.63%) presented in acute emergency with symptoms of abdominal pain in all 88(100%), amenorrhea in 81(92.04%), abdominal distention in 52(59.09%), vaginal bleeding in 39(44.31%), fainting attacks in 30(34.09%), early pregnancy symptoms in 33(37.5%), dyspareunea in 07(7.95%) and history of D&C induced abortion in 05(5.68%) patients. Clinical signs found were tachycardia in 75(85.22%), hypotension in 60(68.18%), abdominal tenderness in 82(93.18%), adenexal tenderness in 65(73.86%), adenexal mass in 32(36.36%) and cervical excitation was positive in 61 (69.31%) patients.

Regarding treatment modalities, laparotomy was performed in 86(97.72%), amongst them salpingectomy in 50(56.81%), salpingo-oophorectomy in 28(31.81%), milking of tube in 03(3.40%) and complete tubal abortion was found in 05(5.86%) patients. 02 patients with unruptured ectopic pregnancy received methotrexate, 01 gave response and the other failed underwent laparotomy and salpingectomy. Regarding maternal outcome no maternal death was found in the study group. Blood transfusion was required in 100% of patients (1-4 pints).

Table No.1: Clinical Presentation

Clinical presentation	No. of patients (n=88)	Frequency
Acute	56	63.63%
Sub acute/chronic	32	36.36%

Table No.2: Clinical Features

Symptoms	Number (n)
Abdominal Pain	88(100%)
Amenorrhea	81(92.04%)
Abdominal Distention	52(59.09%)
Viginal Bleeding	39(44.31%)
Fainting Attacks	30(34.09%)
Nausea	33(37.5%)
New Onset Dyspareunea	07(7.95%)
Signs	**Number (n)**
Tachycardia	75(85.22%)
Hypotension	60(68.18%)
Abdominal Tenderness	82(93.18%)
Cervical Excitation	61(69.31%)
Adenexal Tenderness	65(73.86%)
Adenexal Mass	32(36.36%)

Regarding the aspect of why we are not receiving the patients with unruptured ectopic pregnancy, we took verbal interviews to assess the educational and the socioeconomic status of our patients. We found that > 90% of our patients belong to poor socioeconomic group and uneducated. Remaining patients belong to

middle class and able to write their name. We found it an important factor in starting late antenatal care.

In this regard, we also assessed the behavior of referring authority as well as our outpatient department; urine for the P.T was the preferable method of diagnosing first trimester pregnancy. Ultrasound was only advocated once patients presented with acute symptoms of ectopic pregnancy.

Data has been analyzed by using SPSS version-10 on computer. Descriptive statistics like frequency, percentage, average, etc, were being computed for data presentation. Statistical test of significance was not be applicable for this descriptive study.

Table No.3:Management Protocol

Management	No. of patients	Frequency
Medical (Methotrexate)	02	2.27%
Salpingectomy	50	56.81%
Salpigoopherectomy	28	31.81%
Milking of fallopian tube	03	3.40%

DISCUSSION

Ectopic pregnancy is still a leading cause of maternal morbidity and mortality worldwide. The frequency of ectopic pregnancy in the current study was 6.6/1000 birth, almost consistent with 5.7/1000 by Ehsan-N[12] and 5.1/1000 by M-Rohi[13] studies. The reported incidence is quite high in advanced world[7,14] , most probably due to the use of advance diagnostic modalities with well established health care system like EPU (Early pregnancy Units).

The lower mean age and parity in the current and other studies[8,15,16], imply that all efforts should be made to detect ectopic pregnancy in the unruptured state to enhance the aspect of successful future pregnancies.

Majority of our patients (97.72%) presented with ruptured ectopic pregnancy required emergency laparotomy which is a trend in most of studies[15,16,17,18] . It also avoids the need of prolong follow up which is not feasible in our setup. RCOG guidelines also favour the use laparotomy for haemodynamically unstable patients[19]. However laparotomy was only performed in 58% cases in a study by Mehboob and Mazhar[10] which is quite low as compared to current study.

No identifiable risk factor found in 65.9% of patients, probably it could be subclinical infection which damaged the endosalpinx and put the studied population at risk of ectopic pregnancy.

The preferable mode of treatment was salpingectomy in 56.8% and salpingo-oophorectomy in 31.81% due to tubal rupture and formation of TO masses as in other studies[12,13,15,16] . Although laparotomy and salpingectomy give a 100% success rate but at the same time, compromise patient's fertility and increase the risk of future ectopic pregnancy[7]. Current study showed no maternal death which might indicate an urgent laparotomy once the patient arrived in the hospital. The under lying fact could be many maternal deaths which go unnoticed because of illiteracy or failure of attending physician to diagnose the problem due to variable presentation.

The rate of unruptured ectopic pregnancy is very low (2.2%) as compared to developed countries[20,21]. Developed countries have better socioeconomic circumstances with better women literacy, provision of EPU and screening/treatment of STD play a vital role in reducing the incidence of ectopic pregnancy and its ruptured state. The low resource setup in Pakistan with illiteracy needs a well planed health education program for both community and health providers. In the current study, although 50% of the women were aware of the pregnancy, didn't communicate with any health facility till they developed the complications. Inspite of having the facility of ultrasound, urine for PT was used for diagnosis of first trimester pregnancy in those who attended the hospital. The health care provider must be aware of the tried of the ammenorrhoea, lower abdominal pain and vaginal bleeding in ectopic pregnancy. It is the high index of suspicion which safeguards the women against misdiagnosis and inappropriate treatment.

Early diagnosis of ectopic pregnancy in the unruptured state favours conservative[19], medical[21,22] and laparoscopic[23,24] management as well as avoids the risk of blood transfusion with its consequences.

CONCLUSION

The detection rate of unruptured ectopic pregnancy was very low at PUMHS hospital mainly due to late reporting to hospital and the poor behavior of attending physician for using appropriate diagnostic tool. A well established health education program for community, CME for doctors along with the provision of serum β HCG estimation and high resolution ultrasound with well trained sonologist are the need of emerging trend.

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Address for Corresponding Author:
Dr. Razia Bahadur Khero
A-14, Mehran Colony, Opposite QUEST,
Nawabshah
Email: drraziakhero@gmail.com
Cell No: 0307-3576266