ORIGINAL ARTICLE

Tubal Ectopic Pregnancy, Management in a Tertiary Care Hospital

NUDRAT SOHAIL, MUHAMMAD TAYYAB, FARHAT IQBAL, *MARIA BUTT, ASGHAR NAQI*

ABSTRACT

Objectives: The study was conducted to analyze the management of diagnosed cases of ectopic pregnancy.
Study design: A Descriptive study.
Setting: Gynae Unit III, Jinnah Hospital Lahore from August 2009 to August 2010.
Method: All the patients diagnosed with ectopic pregnancy presenting in the outpatient or emergency department gynae unit III, during the study period were included.
Results: There were 59 tubal pregnancies diagnosed during the study period. Out of the 59 patients, 56 patients presented with acute symptoms, 3 patients were asymptomatic, 50 patients had amenorrhea, 4 patients presented with hypovolemic shock and 4 patients had adnexal mass. 3 patients were managed conservatively with methotrexate and 57 patients underwent laparotomy. Out of 57 patients undergoing laparotomy, 51 had ruptured tubal pregnancy, 4 had unruptured tubal pregnancy and 2 had tubal abortion. No identifiable cause for ectopic pregnancy was found in 49 patients whereas 4 patients had previous surgeries, 4 had pelvic inflammatory disease and 2 had IUCD inserted. All patients were discharged without significant morbidity.
Conclusion: Tubal ectopic pregnancy remains a gynecological emergency in tertiary care hospital due to referral and lack of antenatal booking. Most of the time no identifiable cause for ectopic pregnancy is found. Late or delayed presentation leads to surgical management.
Keywords: Ectopic Pregnancy, Management.

INTRODUCTION

Ectopic pregnancy remains a direct cause of maternal death all over the world[1]. The etiology is very diffuse, varying from risk factors as simple as multiparity and smoking to as complex as post tubal ligation. The other predisposing factors may be previous pelvic surgeries, assisted reproduction techniques and pelvic inflammatory diseases. The incidence of ectopic pregnancy is on the rise throughout the world[2, 3]. In U.K, it is 1 in 150 mature intrauterine pregnancies this rise is attributed to rise in the sexually transmitted diseases all over the world[4]. The clinical presentation of the patient is also variable from acute to chronic. Symptoms of early pregnancy like amenorhoea and nausea may be absent leading to difficulty in the diagnosis. The usual presentation is amenorhoea, pain abdomen and circulatory collapse[5]. Diagnosis is highly dependable upon clinical suspicion however serum β-HCG endovaginal ultrasonography and laparoscopy remains gold standards for confirmation[6]. Management also varies from medical treatment with single intramuscular injection of 50mgs of methotrexate to laparoscopic instillation of drugs like methotrexate, saline and KCL into the tubal mass or laparoscopic salpingiostomy or salpingectomy. Laparotomy for salpingectomy or salpingiostomy is carried out in the cardiovascularly collapsed patients.

The purpose of carrying out this study was to look into the characteristics of the predisposing factors presentations, treatment offered medical or surgical and the outcome of all the diagnosed cases of tubal ectopic pregnancies in tertiary care teaching hospital.

Department of Obstetrics & Gynaecology, Allama Iqbal Medical College/Jinnah Hospital, Lahore
Correspondence to Dr. Nudrat Sohail

PATIENTS AND METHODS

This study was carried out in Gynae unit III, Jinnah hospital Lahore from August 2009 to August 2010. All the case files of the women are confirmed with the diagnosis of tubal ectopic pregnancy were carefully reviewed. The demographic data was recorded on a predesigned proforma including name age, parity and address. Date and mode of admission was also recorded. Duration of amenorhoea, nausea, vomiting, sweating, pain abdomen and characteristic of abdominal pain were noted. Past medical and surgical histories along with obstetrical and gynecological history regarding use of contraception were recorded. Findings of physical, abdominal and pelvic examination were recorded. Urinary for

pregnancy test, serum β HCG and abdominal or endovaginal USG findings were also recorded. The management carried out medical or surgical was noted for each patient. The outcome of management including failure or success of medical treatment was recorded at the time operative finding including amount of blood, in the peritoneal cavity, state of the tube ruptured, intact or tubal abortion. Presence of peritubal periovarian or other adhesions were noted. After collection of data the data was analyzed, results were interpreted and inferences were drawn.

RESULTS

Three patients were managed medically with single injection of intramuscular methotrexate 50 mgs. 2 of these patients were successfully discharged with follow-up showing resorption of tubal pregnancy and diminished βHCG levels; however one patient ended up in tubal rupture and emergency laparotomy for salpingectomy was carried out. Intraperitoneal bleed was more than 500 mls in 29 patients and up to 400 mls in 17 patients only. 3 patients had intraperitoneal bled up to 100 mls. Blood was transfused to 52 patients. 7 patients did not receive any transfusion.4 patients received 4 transfusions. Ruptured tubal pregnancy was encountered in 51 patients. 4 Patients had intact tubal pregnancy but tubal mass was more than 3cms in all of these patients with moderate abdominal pain leading to laparotomy. 2 patients had tubal abortion. No post operative morbidity like disseminated intravascular coagulation, renal failure or wound infection with only subcutaneous tissue involvement was seen in 2 patients. Fortunately no maternal mortality was recorded in this series of patients.

Table 1: Mode of admission

Mode of admission	**=n**	**%age**
Booked		0
Unbooked	ALL	100
Total	ALL	100

Table 2: Age of patients

Age	**=n**	**%age**
< 20 years	1	1.69
21-25 years	15	25.42
26-30 years	30	50.8
31-35 years	6	10.16
36-40 years	5	8.47
40 years & above	2	3.38

Table 3: Risk factors

Risk factors	**=n**	**%age**
No factor identified	49	83.05
Previous surgeries	5	8.47
IUCD	1	1.69
Pelvic inflammatory disease	4	6.77

Table 4: Modes of presentation

Clinical features	**=n**	**%age**
Aysmptomatic	3	5.08
Amenirrhoea	50	84.75
Pain abdomen	56	94.92
Vaginal bleeding	49	83.05
Circulatory collapse	4	6.78
Adnexal mass	4	6.78

Table 5: Blood transfusions

No. of bags	**=n**	**%age**
None	7	11.86
One	19	32.20
Two	16	27.11
Three	13	22.03
More than three	04	6.77

Table 6: Period of amenorrhoea

Period of amenorrhoea	**=n**	**%age**
< 8 weeks	36	61.02
Upto 8 weeks	17	28.81
Between 8 – 10 weeks	3	5.08
12-14 weeks	3	5.08

Table 7: Mode of admission

Tubal status	**=n**	**%age**
Ruptured	47	79.66
Unruptured	10	16.94
Tubal abortion	2	3.38

DISCUSSION

In an ideal world the diagnosis of extra uterine pregnancy should be made in all the pregnant women as early as to be managed conservatively with minimal invasive investigations and interventions.

Gunawardena et al in their studies found that most of the cases could be managed by treatment options other than open surgery depending upon early detection, clinical stability and size of the ectopic pregnancy[7]. The improvements in the diagnostic modalities and advancement in managing unruptured ectopic pregnancy has been revolutionalized. , Madendag et al in his studies comments that even when the maternal serum Beta Human Chorionic Gonadotropin (HCG) level is below the discriminatory zone (<or=1,000 mIU/mL) then Sonographic appearance of endometrium may be used to predict tubal pregnancy, a trilaminar pattern of endometrium indicate tubal pregnancy[8].

The mortality rate from ectopic pregnancy in developed countries has dropped from 72 -90% in the 1880's to 0.1% in the 2000's, it still remains a significant cause of maternal death[9].

The rise in sexually transmitted diseases has increased the incidence of tubal ectopic pregnancy by increasing the incidence of pelvic inflammatory disease[10]. Most of the time no predisposing factor

leading to ectopic pregnancy can be identified, this is because investigations to do so are not available. In our study no causative factor was found in 83% of the patients,8% of the patients had previous pelvic surgeries,7% of the patients had pelvic inflammatory disease and 1% had intrauterine contraceptive device. Most of the studies show pelvic inflammatory disease and previous pelvic surgery to be the most prevalent cause of tubal ectopic pregnancy.

In our study 50% of the patients were of the age 26 years to 30 years, only one patient was 19 years of age and two patients were 40 years, which is quite consistent with results of a study conducted by Pal et al in India with maximum incidence of ectopic pregnancy in age group of 21-35 years[11]. The peak reproductive age of presentation of tubal pregnancy represents the age where most of the women have had their previous pregnancies or pelvic surgeries.

All the patients were unbooked and presented for the first time in the emergency or outdoor with at least one complaint this is explained by the fact that the study was carried out in a tertiary care hospital admitting referred patients. The most common patient presentation in this study was pain abdomen in 95% of the patients with amenorhoea following present in 84% of the patients. This is in comparison to the study carried out by Malik et al[12].Vaginal bleeding in the form of spotting or mild nature was seen in 83% of the patients which is in accordance with the study by Pal et al.

Three patients were asymptomatic fulfilling the criteria to be managed conservatively by single dose of methotrexate. Kaya et al in his study concluded that intratubal methotrexate injection during laparoscopic salpingostomy is a practical option for women with un ruptured ectopic pregnancy[13].We did not proceed with laparoscopic management because of limited resources and non availability of endoscopic equipment round the clock.

It is this group of asymptomatic patients who are diagnosed only when the clinician keeps ectopic pregnancy as a clinical suspicion otherwise the diagnosis is either delayed or missed. In a study by Fujishita et al, the outcome of laparoscopic salpingostomy for tubal pregnancy was investigated[14]. He concluded Laparoscopic salpingostomy may be practiced as conservative surgery for proximal ectopic pregnancy, and gestational mass size is not important.

Only three patients in this study were diagnosed to be managed conservatively. one of these patients despite fulfilling the criteria still had ruptured ectopic pregnancy and was rushed for emergency laparotomy and ended up having salpingiostomy. This is in contrast with the study conducted by Al-Sunaidi et al where most cases of ectopic pregnancy treated with medical treatment with methotrexate were successful[15].

The small number of the patients in the conservative management group indicates that women do not confirm pregnancy before missing at least two periods. Conservative management leads to minimal morbidity. Taylor et al in his research studies highlights the conservative treatment in four patients with cervical ectopic pregnancy with success[16].

The presentation of 95% of the patients through the emergency with abdominal pain and amenorhoea reflects the fact that women seek health care only when there is a problem. 95% of the patients ended up in laparotomy with 80% of the patients undergoing salpingectomy to control haemostasis, this represents late appearance of these patients with significant morbidity and threatening mortality.3% of the patients who had tubal abortion also ended up in laparotomy because of pain and haemoperitoneum, this again was of delayed presentation .In a study from Pakistan by Ayesha et al similarly quotes the late patient presentation as a cause of managing patients surgically[17].

Seventeen percent of the patients had unruptured tubal ectopic pregnancy but had significant abdominal pain and they did not fall into the group fulfilling the conservative management group so they were managed surgically. Early diagnosis and management reduces the maternal morbidity and mortality. Allahyar et al, discusses the surgical management of ectopic pregnancy and sites it as a major cause of morbidity and mortality[18].

CONCLUSION

This study concludes that tubal ectopic pregnancy remains a gynecological emergency in a tertiary care hospital due to referral and lack of antenatal booking. In most of the patients the cause of ectopic pregnancy is not identified .Late and delayed presentation leads to surgical intervention.

REFERENCES

1. Report on confidential enquiries into Maternal Deaths in the UK (1991-1993). Published 1996.London HMSO.
2. Drife JO. Tubal pregnancy. Rising incidence, earlier diagnosis, more conservative treatment. BMJ 1990; 301:1057-8.
3. Makinen J. The regional versus national incidence of ectopic pregnancy in Finland from 1966 to 1986. Int J Gynaecol Obstet 1989;28:351-4.
4. D. Keith Edmonds, John Dewhurst . Dewhurst's textbook of Obstetrics and Gynaecology for postgraduates. Blackwell Science London. Page 67.
5. Rowlinson JS, Diagnosing Ectopic Pregnancy in UK Emergency Department. Israeli Journal of Emergency

Medicine – Vol. 8, No.3 Nov. 2008 Available online : http://www.isrjem.org/isrjem_nov08%20rowlinson_ectopic_postprod.pdf.
6. Warren Oliver , Kinross James, Paraskeva Paraskevas and Ara Darzi. Emergency laparoscopy – current best practice. *World Journal of Emergency Surgery* 2006, 1**:**24.
7. G H K K Gunawardena1, K G W Priyananda2, G K C Jayalath3, D M P Disanayake4. A case series on current management options of tubal ectopic pregnancy in a tertiary care unit. Sri Lanka Journal of Obstetrics and Gynaecology 2009; 31: 16-19.
8. Col-Madendag I, Madendag Y, Kanat-Pektas M, Danisman N..Can Sonographic endometrial pattern be an early indicator for tubal ectopic pregnancy and related tubal rupture? Arch Gynecol Obstet. 2010 Feb;281(2):189-94. Epub 2009 Apr 30.
9. Furquhar CM, Ectopic Pregnancy. Lancet 2005;366: 583-91.
10. Kamwendo F, Forslin L, Bodin L, Danielson D. Epidemiology of ectopic pregnancy during a 28 year period and the role of pelvic inflammatory disease. Sex Trans Infect.2000;76(1):28-32.
11. Pal A, Gupta KB, Sarin RA. Study of ectopic pregnancy and high risk factors in Himachal Pradesh. J Indian Med Assoc 1996; 94: 172-3.
12. Malik N, Iqbal F, Tayyab R. Analysis of tubal ectopic pregnancy. JCPSP 200:11:632-635.
13. Kaya H, Badar Y, Omen S, Okay O, Kari M, Ayden AR, Oberstar D. Intratubal methotrexate for prevention of persistent ectopic pregnancy after salpingostomy. J Am Assoc Gynecol Laparoscope. 2002 Nov;9(4):464-7.
14. Fujishita A, Khan KN, Kitajima M, Hiraki K, Miura S, Ishimaru T, Masuzaki H.Re-evaluation of the indication for and limitation of laparoscopic salpingostomy for tubal pregnancy. Eur J Obstet Gynecol Reprod Biol. 2008 Apr;137(2):210-6. Epub 2007 Apr 24.
15. Al-Sunaidi M ; Tulandi T. Surgical treatment of ectopic pregnancy. Semin Reprod Med. 2007; 25(2):117-22 (ISSN: 1526-8004)
16. Taylor JE, Yalcinkaya TM, Akar ME.. Successful conservative management of cervical ectopic pregnancy: a case series. Arch Gynecol Obstet. 2010 May 29.
17. Ayesha Imran, Nilofar Mustafa, Naeem Akhtar . Frequency Of Different Presentations And Surgical Management Of Ectopic Pregnancy At Combined Military Hospital Lahore. Issue Year : 2009, Issue Number : 3, Issue Month : June. Available online from http://www.pafmj.org/printdetail.php?id=252&t=o.
18. Allahyar Jazayeri, MD, PhD, FACOG, DACOG, FSMFM, Women Specialty Care, Green Bay WI; Medical Director of Perinatal Services, Bellin Health Hospital Center Herbert S Coussons, MD, FACOG, Private Practice in Obstetrics and Gynecology, Women's Specialty Care. Surgical Management of Ectopic Pregnancy. Available online http://emedicine.medscape.com/article/267384-print