FREQUENCY OF DIFFERENT PRESENTATIONS AND SURGICAL MANAGEMENT OF ECTOPIC PREGNANCY AT COMBINED MILITARY HOSPITAL LAHORE

Ayesha Imran, Nilofar Mustafa, Naeem Akhtar

Combined Military Hospital Lahore

ABSTRACT

Objectives: To determine frequency of different presentations of ectopic pregnancy presenting at Combined Military Hospital Lahore and types of surgical management offered.

Design: Descriptive study

Place and Duration of Study: Department of Gynaecology and Obstetric Combined Military Hospital, Lahore from1-06-2006 to 31-12-07.

Patients and Methods: Fifty women with ectopic pregnancy whether booked or unbooked were treated at CMH, Lahore, during study period were included. Diagnosis was made from history, clinical examination and confirmed by ultrasonography, serum ß-hCG or laparoscopy.

Results: The mean age of patients was 23.6 $\pm$ 5.0. The commnest presentation was with pain lower abdomen 92.0%. Eighty two percent of patient presented with amenorrhea. Vaginal bleeding/spotting was present in 76.0% while 18.0% presented with shock and fainting attacks were the presenting feature in 14.0% of cases. Regarding surgical management salpingectomy was performed in 84.0% of cases. Linear salpingostomy in 6.0 % of patients. Segmental resection with reanastomosis in 4.0% of cases, salpingoophrectomy in 4.0% and partial oophrectomy in 2.0% of cases.

Conclusions: Ectopic pregnancy is still a major obstetric and gynaecological emergency. As majority of patients present at late stage with either ruptured ectopic pregnancy or irrepairable damage to tube and ovary so management by laparotomy is more practicable in developing countries like ours.

Keywords: Ectopic pregnancy, ß-hCG, pelvic inflammatory disease, laparoscopy, ultrasonography

INTRODUCTION

Ectopic pregnancy is defined as a pregnancy that is implanted outside the uterine cavity i.e. at a site that by nature is not designed anatomically and physiologically to accept the conception or to permit its growth and development [1].

It is a major problem in gynaecology as there is evidence of increasing incidence throughout the world [2]. Incidence of ectopic pregnancy is 1 in 150 mature intrauterine pregnancies in U.K [3].

There are many predisposing factors leading to ectopic pregnancy. Incidence of ectopic pregnancy is influenced by multiple lifetime sexual partners, induced abortion, pelvic inflammatory diseases, miscarriages and, pelvic surgery [4]. Previous use of intera uterine contraceptive devices (IUCD) [5] as well as smoking also increase risk [6].

Age and race are not the significant risk factors for ectopic pregnancy [4].

Ectopic pregnancy usually presents with amenorrhoea, symptoms of pregnancy, lower abdominal pain, vaginal bleeding, adnexal mass [7] or the patient may be in a state of shock in case of ruptured ectopic pregnancy [8].

The diagnostic modalities used are, urine for pregnancy test, quantitative measurement of serum ß-hCG, transabdominal USG [9], transvaginal USG, in doubtful cases laparoscopy [10].

Medical treatment can be done with a variety of drugs, which can be given systemically or locally by different routes.

Surgical treatment can be performed either laparoscopically or by open surgical procedures.

Management depends upon the clinical condition and future fertility desires of the patients [8].

Ectopic pregnancy is an important cause of morbidity and mortality world-wide [10]. In emergency cases risk of maternal morbidity and mortality increases many folds and this can be attributed to diversities in modes of presentation and of its multiple predisposing factor.

Correspondence: Dr Ayesha Imran, Department of Gynaecology / Obs, CMH Lahore
Received: 19 March 2008: Accepted 17 March 2009

Operative laparoscopy has largely replaced laparotomy in many institutes but in cases of irreparable tubal damage and extensive haemorrhage, salpingectomy is still the treatment of choice [11].

This study was done to throw light on modes of presentation and type of surgical management offered to patients of ectopic pregnancy.

PATIENTS AND METHODS

This descriptive study was carried out at department of Gynaecology and Obstetric Combined Military Hospital, Lahore from 01 June 2006 to 31 Dec 2007. All women of suspected ectopic pregnancy were admitted and resuscitated in Gynae ward. Detailed history and physical examination was carried out. General condition seen, pulse, blood pressure were recorded. Blood was sampled, cross-matched and intravenous line was secured. Duration of amenorrhoea, amount of vaginal bleeding, signs of shock, abdominal pain and tenderness were recorded. Possible risk factors like previous history of ectopic pregnancy, chronic pelvic inflammatory disease, prior tubal surgery and use of IUCD were recorded. Investigations i.e. haemoglobin, blood complete picture, urine for pregnancy test, transabdominal and transvaginal sonography and serum ß-BCG were carried out. Diagnosis was made from history, clinical examination and confirmed by ultrasonography, serum ß-hCG or laparoscopy. Emergency surgical intervention was done in diagnosed cases of ectopic pregnancy. The type of surgical management offered in each case was dependent on obstetrical history of the patient, anatomical location of ectopic pregnancy and haemodynamic status of patient. Any complication was noted.

RESULTS

During the study period total number of pregnancies were 2723, and ectopic pregnancies, there were fifty.

The age of patients ranged between 18-35 years i.e. Fifteen (30%) patients were less than or equal to 20 years of age, 30 (60%) patients were between 21-30 years of age and 5 (10%) patients were > 31 years of age. The mean age was 23.6±5.0.

Frequency of known risk factors was, chronic pelvic inflammatory disease in 26 (52%) patients, use of IUCD in 4 (8%) patients, history of previous pelvic surgery in 4 (8%) patients, infertility in 12 (24%) patients, previous ectopic pregnancy in 1 (2%) patient and endometriosis in 3 (6%) patients (Table-1).

Obstetrical history showed that primigravidae were 20 (40%), primiparas were 7 (14%), cases with previous abortion were 9 (18%) while 14 (28%) cases were multiparas.

Distribution of presenting complaints revealed 41 (82%) cases presented with amenorrhoea, 46 (92%) patients presented with pain lower abdomen, 38 (76%) presented with vaginal bleeding/spotting, 7 (14%) cases presented with fainting attacks and with shock 9 (18%) patients presented.

According to distribution of diagnostic modalities, pregnancy test was performed in

30 (60%) patients, serum ß-hCG in 34 (68%) patients, trans-abdominal ultrasonography in 41 (82%) patients, transvaginal ultrasonography in 15 (30%) cases and laparoscopy was performed in 4 (8%) patients (Table-2).

On laparoscopic findings, out of four patients, blood in pouch of Douglous found in 2 (50%) cases, intact tubal pregnancy observed in 1 (25%) patient and inconclusive also in 25% cases.

Location of ectopic pregnancy revealed 37 cases (74.0) of ampullary, 7 (14%) cases of isthmic, 4 cases (8.0%) fimbrial while cases of ovarian were 1 (2.0%) and heterotopic pregnancy was 1(2%) (Table-3)

Regarding distribution of surgical management, salpingectomy performed in 42 (84%) patients, linear salpingostomy in 3 (6%) patient, segmental resection with reanastomosis in 2 (4%) patients, Salpingo-oophorectomy in 2 (4%) patients and partial oophorectomy performed in 1 (2%) patient.

Table-1: Distribution of cases by known risk factors (n=50)

Risk factors	No	%
Pelvic inflammatory disease	26	52.0
IUD	04	08.0
Previous pelvicsurgery	04	08.0
Infertility	12	24.0
Previous ectopic pregnancy	01	02.0
Endometriosis	03	06.0

Table-2: Distribution of cases by diagnostic modalities (n=50)

Diagnostic modalities	No	%
Pregnancy test	30	60.0
S ß-hCG	34	68.0
Trans-abdominal ultrasonography	41	82.0
Transvaginal ultrasonography	15	30.0
Laparoscopy	04	08.0

Table-3: Distribution of cases by locations of ectopic pregnancy (n=50)

Locations of ectopic pregnancy	No	%
Tubal (n = 48)	48	96.0
Ampullay	37	74.0
Isthmic	07	14.0
Fimbrial	04	08.0
Ovarian (n = 1)	01	02.0

DISCUSSION

Ectopic pregnancy is the most important cause of maternal mortality and morbidity in the first trimester.

The incidence has increased world-wide with improvement in diagnostic techniques. Most fatal cases resulted from delayed diagnosis and inappropriate investigations and management.

With the availability of rapid and sensitive radioimmunoassay in ß-hCG and transvaginal USG in doubtful cases the physicians diagnose ectopic pregnancy at an earlier stage.

In our study, total numbers of pregnancies were 2723 out of which ectopic pregnancies were fifty. Therefore, rate of ectopic pregnancy in the current study was observed 1.8%, which is close to the results of a study carried out earlier showing 1.3% and 1.6% [12, 13].

Whereas a study at Nepal showed frequency of 0.93% [14]. The overall incidence may be quite lower than that indicated in this tertiary hospital study because in Pakistan most of the deliveries are conducted at home and such major gynaecological emergencies are referred to tertiary care hospital.

Regarding the age group maximum number of cases occurred in the age group of 21-30, 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 [15].Pelvic inflammatory disease is thought to be an important risk factor and same was observed in present study [14].History of infertility was seen in 24.0% of patients as was observed by

others [16].History of previous pelvic surgery and use of IUD is comparable to other studies [13, 17]. In our study majority of the patients presented with abdominal pain, as observed earlier in Pakistan and abroad [14, 15, 18]

Beta-human chorionic gonadotrophic (ß-hCG) levels were greater than 1300 IU/ml in all patients in which ß-hCG level was studied, which was consistent with another study [20].Abdominal USG was diagnostic in 92% of cases. The results compatible with results of study at UK [21].

In present study, 96% of cases of ectopic pregnancy were tubal and 2% were ovarian. About similar results (97.7%) reported by Breen 22 [22]. The sites described by Bouyer et al which were ampullary (70%) isthmic (12%) and fimbrial (11.1%) 23[23].

Majority of patients in current study presented with acult abdomen and require emergency laparotomy. There is no consensus in the literature regarding conservative versus radical treatment of tubal pregnancy in terms of future reproductive performance. Most of studies have shown higher intrauterine pregnancy rates after salpingostomy than after salpingectomy are quoted by Tahseen and Wyldes (2003) [24].

In present study, laparotomy was performed in all cases. Salpingectomy was done in 84% of patients because of higher incidence of tubal rupture. Salpingo-oophorectomy was performed in 4% of patients and segmental resection with reanastomosis in 4% of patients.

Conservative surgery was performed in only four cases that had unruptured tubal and ovarian pregnancy. In 3 patient (6.0%) of cases linear salpingostomy was performed and in 2% of cases partial oophorectomy was done in case of unruptured ovarian pregnancy. However, emergency laparotomy was performed in 57.9% of cases in a study by Mahboob and Mazhar (2006) at Mother and Child Health Centre, Pakistan Institute of Medical Sciences, Islamabad, wherein quite low as compared to current study [25].

CONCLUSION

Although, most ectopic pregnancies may potentially be treated by laparoscopic surgery as it is superior but it is not available at all centers in developing countries like Pakistan. Secondly there is late presentation of patients.

In the current study the average duration of hospital stay was 4-6 days. Mortality was nil and all cases of laparotomy did not require any further procedure, so we concluded that in the socioeconomic setup of countries like Pakistan, management by early laparotomy is more feasible.

REFERENCES

1. Klentzeris LD, Shaw RW, Soutter WP, Stanton SL, Ectopic pregnancy, In. editors. Gynaecology 3rd ed. London: Elsevien. 2003; 371-84.
2. Grudzinskas JG. Miscarriage ectopic pregnancy and trophoblastic disease. In: Edmonds DK, editor. Dewhurst's textbook of obstetrics and gynaecology for postgraduates. 6th ed. London: Blackwell, 1999; 61-76.
3. Howie S. In: Textbook of Obstet and gynaecology for postgraduates. 6th ed. London: Blackwell Scientific Publication, 1999; 61-75.
4. Anorlu RI, Oluwole A, Abudu OO, Adebajo S. Risk factors for ectopic pregnancy in Lagos, Nigeria. Acta Obstet Gynecol Scand 2005; 2: 184-8.
5. Ehsan N, Mehmood A. Ectopic pregnancy: an analysis of 62 cases. J Pak Med Assoc 1998; 48: 26-9.
6. Fernandez H, Gervaise A. Ectopic pregnancies after infertility treatment: modern diagnosis and therapeutic strategy. Hum Reprod Update 2004; 10: 503-13.
7. Khalid T, Elahi N. Clinical presentation of chronic ectopic pregnancy. J Coll Phy Surg Pak 2000; 10: 200-3.
8. Chohan A. Ectopic pregnancy. Fundamentals of gynaecology Lahore: MAR Publisher, 2000: 3-95.
9. Murray H, Baakdah H, Bardell T, Tulandi T. Diagnosis and treatment of ectopic pregnancy. CMAJ 2005; 173: 905-12.
10. Farquhar CM. Ectopic pregnancy. Lancet 2005; 366:583-91.
11. Csiszar P, Bacsko G, Borsos A. Trend from laparotomy to laparoscopy in the case of treatment of ectopic pregnancy. Acta Chir Hung. 1997; 36 :1-4: 61-2.
12. Khaleeque F, Siddique R, Jafaray S. Ectopic Pregnancy: a three year study. J Pak Med Assoc 2001' 51: 240-3.

13. Gharoro EP, Igbafe AA. Ectopic pregnancy revisited in Benin City, Nigeria: analysis of 152 cases. Acta Obstet Gynecol Scand. 2002; 81: 1139-43.

14. Poonam Intials, Uprety D, Banerjee B. Ectopic pregnancy - two years review from BPKIHS, Nepal. Kathmandu Univ Med J 2005; 3: 365-9.

15. 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.

16. Ali R, Roohi M. Ectopic pregnancy: changing trend in incidence and clinical presentation. Professional Med J 2001; 8: 518-23.

17. Ehsan N, Mehmood A. Ectopic pregnancy an analysis of 62 cases. J Pak Med Assoc 1998; 48: 2: 26-9.

18. Malik AM, Aziz A. Evaluation and management of tubal ectopic pregnancy. J Surg Pak 2000; 5: 23-5.

19. Afridi B, Maqsood A. Ectopic pregnancy. Pak J Obstet Gynaecol 1991; 4: 55-9.

20. Naseem I, Bari V, Nadeem N. Multiple parameters in the diagnosis of ectopic pregnancy. J Pak Med Assoc 2005; 55: 74-6.

21. Condous G, Okaro E, Khalid A, Lu C, Huffel S V, Timmerman D, et al. The accuracy of transvaginal ultrasonography for the diagnosis of ectopic pregnancy prior to surgery. Hum Reprod 2005; 20: 1404-9.

22. Breen JL. A 21 year survey of 654 ectopic pregnancies. Am J Obstet Gynaecol 1970; 106: 1004-19.

23. Bouyer J, Coste J, Fernandez H, Pouly JL, Job-Spira N. Sites of ectopic pregnancy: a 10 year population-based study of 1800 cases. Hum Reprod 2002;17: 3224-30.

24. Tahseen S, Wyldes M. A comparative case-controlled study of laparoscopic vs laparotomy management of ectopic pregnancy: an evaluation of reproductive performance after radical vs conservative treatment of tubal ectopic pregnancy. J Obstet Gynaecol 2003; 23: 2: 189-90.

25. Mahboob U, Mazhar SB. Management of ectopic pregnancy: a two-year study. J Ayub Med Coll Abbottabad 2006; 18: 34-7.
