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ECTOPIC PREGNANCY AND THEIR RISK FACTORS – A STUDY OF 28 PATIENTS

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ABSTRACT

OBJECTIVE: *To evaluate the risk factors of ectopic pregnancy in patients presenting in our setup.*
METHODOLOGY: *This prospective observational study was conducted at Department of Gynecology and Obstetrics Unit I, Liaquat University hospital from June 2007 to May 2008. An informed consent was taken before inclusion of patients in the study. A predesigned proforma was used to collect the study variables. Data analysis was done through SPSS 17.*
RESULTS: *The total number of admissions during the study period was 4332, out of which 28 patients were diagnosed with ectopic pregnancy, giving a ratio of 1:154, with Mean±SD age of 26±4.7 years. The majority of patients 13 (46.42%) were in 26-30 years of age group followed by 6 (21.42%) patients in 20-25 years of age range. Among 28 patients, 4 (14.28%) were primigravida nine patients (32.14%) were G2, whereas 8 (28.57%) patients were G3 and 7(25%) were G4 or above. Pelvic inflammatory disease was the commonest factor found in majority of patients i.e. 15 (53.57%), followed by history of abortion which was present in 13 (46.42%) patients. Abdominal pain and tenderness both were present in 17 (60.71%). Eleven (39.20%) had complaint of bleeding per vaginum. Five (17.85%) had syncope, whereas 18 (64.28%) patients had tachycardia. Adnexal mass was felt in 21(75%) patients and 3 (10.71%) were in shock.*
CONCLUSION: *Pelvic inflammatory disease and induced abortion are preventable risk factors. There is a dire need to improve clinical expertise in terms of early diagnosis and management to reduce the incident of ectopic pregnancy.*

KEYWORDS: Risk factors, ectopic pregnancy, pelvic inflammatory disease, induced abortion

INTRODUCTION:

When fertilized ovum is implanted in any tissue other than the uterine wall it is termed as ectopic pregnancy. Most ectopic pregnancies occur in the fallopian tube, the condition is also known as tubal pregnancy. Implantation can also take place in the cervix, ovaries, and abdomen.[1]

Ectopic pregnancy is among the commonest and frequently reported condition in our setup. Sometimes patients may lend up in emergency department as well. The frequency of ectopic pregnancy is increasing throughout the globe.[2] Ectopic pregnancy is among the commonest cause of mortality in early pregnancies. Ectopic pregnancy also causes pelvic infections. There are several developments and enchantments in treatment and management of ectopic pregnancies recently. [3]

One of immense challenges to clinicians is clinical diagnosis of early unruptured pregnancy. Laparoscopy is considered as the classic investigative assessment in assumed ectopic pregnancy and it also regarded as secure and efficient. However a amalgamation of clinical features, like quantitative ?-hCG and high resolution transvaginal ultrasound scan have made it possible to make an early and exact identification of ectopic pregnancy to be made without resorting to laparoscopy. [2,3]

The treatments available are hopeful, medical or operative (laparotomy or laparoscopy). Features guiding which option to follow depend on problem such as expenditure, surgeon's proficiency, accessibility of advance equipment, patient's situation at admission. If tubal burst or abortion takes place, slowly and gradually the signs and symptoms are less severe and the correct diagnosis becomes difficult to establish. Time since onset of

symptoms and start of treatment is of profound importance as it dictates the morbidity and mortality related with ectopic pregnancy.[4]

The incidence and frequency of ectopic pregnancy is difficult to determine due to several reasons, generally because of improper data collection and data management in our part of world, a wide variability in treatment facilities and resources availability and patient attitude towards getting proper treatment.[1, 3] In such a scenario, this study was conducted to evaluate the risk factors of ectopic pregnancy in patients coming to this hospital.

METHODOLOGY:

This prospective observational study was conducted at Department of Gynecology and Obstetrics Unit I, Liaquat University hospital from June 2007 to May 2008. Patients were enrolled in the study by non-probability convenience sampling technique. Inclusion criteria were females of 15-45 years of age. Patients with co-morbidities were excluded from the study. An informed consent was taken before inclusion of patients in the study. Patients were evaluated by age, parity, gestational age, laboratory investigation results, time interval to treatment and procedure performed. A predesigned proforma was used to collect the study variables. All patients were managed by senior residents and consultants. All routine investigation were carried out including complete blood count and particular investigation for diagnosis like ultrasonogram and urinary ?-hCG test were performed for all cases. Absence of an intrauterine gestational sac, presence of an adenexal mass and the presence of fluid in the cul-de-sac was checked through ultrasound. A detailed history was taken with highlighting and with evaluation of ectopic pregnancy. All operated cases underwent laparotomy and the operative diagnosis of ectopic pregnancy was established by histopathological assessment of the specimen.

RESULTS:

The total number of admissions during the study period was 4332, out of which 28 patients were diagnosed with ectopic pregnancy, giving a ratio of 1:154, with Mean±SD age of 26±4.7 years. The majority of patients 13 (46.42%) were in 26-30 years of age group followed by 6 (21.42%) of patients in age range of 20-25 years of age. Four patients (14.28%) were in 31-35 years of age range. Three (10.71% of patients were in 36-40% years of age range and 2 (7.14%) of patients were between 41-45 years of age range. Among 28 patients, 4 (14.28%) were primigravida nine patients (32.14%) were G2, whereas 8 (28.57%) of patients were G3 and 7(25%) were G4 or above Table – I.

Various risk factors were studied; patients had a variety of risk factors which present as alone and in combination also. Five

TABLE I
DEMOGRAPHIC FEATURES

Age range (years)	Number of patients	Percentage %
20-25	6	21.42
26-30	13	46.42
31-35	4	14.28
36-40	3	10.71
41-45	2	7.14
PARITY		
G1	4	14.28
G2	9	32.14
G3	8	28.57
G4 and exceeding	7	25

TABLE II
RISK FACTORS

Risk factors identified alone or in combination	Number of patients	Percentage %
Infertility	5	17.85
Pelvic inflammatory disease	15	53.57
Previous abortion	13	46.42
Previous surgery	12	42.85
Contraceptive use	8	28.57
No risk factor indentified	2	7.14

TABLE III
CLINICAL FEATURES

Feature Present alone or in combination	Number of patients	Percentage
Amenorrhea	21	75
Abdominal tenderness	17	60.71
Abdominal pain	17	60.71
Bleeding per vaginum	11	39.28
Syncope	5	17.85
Tachycardia	18	64.28
Adnexal mass	21	75
Shock	3	10.71

(17.85%) of patients in this series had history of infertility. Pelvic inflammatory disease was the commonest variable found in majority of patients i.e. 15 (53.57%), followed by history of abortion which was present in 13 (46.42%) of patients. History of previous surgery was present in 12 (42.85%) patients. Majority of patients had not used contraception in any form. However only 8 (28.57%) had used contraception. In 2 (7.14%) no risk factor was indentified Table – II.

Majority of patients were presented with a combination of symptoms. Twenty one (75%) had amenorrhea. Abdominal pain and tenderness both were present in 17 (60.71%). Eleven (39.20% had complaint of bleeding per vaginum. Five (17.85%) had syncope. Whereas 18 (64.28%) patients had tachycardia. Adnexal mass was felt in 21(75%) of patients and 3 (10.71%) were in shock Table – III.

DISCUSSION:

It is suspected for a long time that increasing age has a role in ectopic pregnancy, but studies have provided conflicting results, though most of them are in favor of this fact. In our series, it was observed that that majority of patients belonged to age group of 26-30 years of age in this study, whereas the recent literature reports an increasing tendency of incidence of ectopic pregnancy in elder women (age 40 or above), Westrom L et al has also reported a high incidence of ectopic pregnancy among aged 20-30 years of age.[6] Where as in a study conducted by Malik AM et al a frequency of 70% of patient were belonged to 21-30 years, and 23.3% of patients belonged to 31-40 years of age.[7] Age-related changing in tubal function may hindrance ovum transportation and consequently end in tubal implantation. However, these theories remain to be tested. A combination of risk factors at an advanced age is generally responsible for increased frequency of ectopic pregnancy.

Some authors are of opinion that the risk of ectopic pregnancy increases with long standing infertility.[7,8] However in this series only 17.85% of patient had history of infertility. Pelvic inflammatory disease, history of pervious abortion and abdominal surgery including cesarean section are among commonly indentified risk factors of ectopic pregnancy. In this series, PID was the commonest risk factor identified in 53.57% of patients. This frequency is almost consistent with previously reported figures in literature.[4, 7]

We have found that a large proportion of patients were not using any kind of contraception, only 28% of patients had used contraception. History of previous abortion was present in 46.42% of cases.

It has been reported that complicated induced abortions constitute the major risk factor of ectopic pregnancy.[9] Contradictory results have been stated in previous studies about the role of previously induced abortion in ectopic pregnancy.[10] We had a significant number of patients with history of abortion i.e. 46.42% of patients.

CONCLUSION:

The frequently reported risk factors like pelvic inflammatory disease, abortion are preventable risk factors. There is a dire need to improve clinical expertise in terms of early diagnosis and management to reduce the incident of ectopic pregnancy.

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