INTRODUCTION

Acute complications of pregnancy can appear in all trimesters; their diagnosis and management are great challenges.\(^1\) Factors affecting pregnancy outcome are socioeconomic status, smoking status and other health related conditions and behaviours.\(^2\) Different types of early pregnancy complications are abortion, gestational trophoblastic disease, ectopic pregnancy and hyperemesis gravidarum. Abortion is the most common complication encountered during early pregnancy.\(^3\) It has serious impact on the life of women as well as its consequences like depression and anxiety. The treatment; either expectant management, vacuum aspirator, surgical emptying of uterus has its own complications.\(^6\)

Common risk factors are extreme of age, multiparity, different medical problems like Diabetes mellitus, hypertension, infection, genetic factors, polycystic ovarian syndrome, thyroid disorders, autoimmune disorders and antiphospholipid syndrome.

Ectopic pregnancy is one of the common early pregnancy complication. It is another frequent, problem that poses a major health risk to women during child bearing years, and accounts for about 9% of all pregnancy related deaths in the United States.\(^7\) It is the third leading cause of maternal death responsible for 6% of maternal mortality.\(^1\) Underlying risk factors are pelvic inflammatory disease and previous surgeries. Other complications of early pregnancy include hyperemesis gravidarum and gestational trophoblastic disease. Identifications of risk factors in early pregnancy complications are of great help in treatment of underlying pathology prior to future conception.

The objective of this study was to find out influence of various risk factors on early pregnancy complications and treatment outcome.

METHODOLOGY

This study was conducted from July 2007 to June 2008 at Obstetric and Gynaecology Department Unit-IV of Liaquat University of Medical and Health Sciences, Jamshoro. During the study period all the admitted women with early pregnancy complication were included in the study while those with an uneventful first trimester were excluded from the study. After taking detailed history, thorough clinical examination was done. All women were investigated for different risk factors like anticardiolipin antibodies, antiphospholipid antibodies for antiphospholipid syndrome, blood sugar level for screening of Diabetes, serum FSH, LH ratio and serum fasting insulin level for polycystic ovarian syndrome.
RESULTS

Patients’ demographic characteristics and frequency of early pregnancy complications with risk factors are summarized in Table I and II respectively. Mean age of early pregnancy complication was 29.45 years. Majority cases were aged 31 years and above (n=56, 48.3%) and between 21 and 30 years (n=40, 34.5%). Early pregnancy complications commonly occurred in multiparous women i.e. in 48 (41.4%) cases, parity was above 3 while 25 (21.6%) cases were primiparous. Frequency of early pregnancy complication was high upto 8 weeks gestational period i.e. 66 (56.9%) cases. Presenting symptoms were bleeding per vaginum in 103 (89.56%) cases, pain in lower abdomen in 77 (66.95%) cases, vomiting in 34 (29.56%) cases and shock in 28 (24.34%) cases (Table I). Abortion was the frequent complication of early pregnancy found in 88 (76.52%) cases. Underlying risk factors found in abortion were antiphospholipid syndrome in 5 (5.68%) cases, Diabetes mellitus in 8 (9.09%) cases, hypertension in 16 (18.18%) cases, polycystic ovarian syndrome in 11 (12.5%) cases and infection in 11 (12.5%) cases. Other complications were gestational trophoblastic disease in 10 (8.69%) cases, ectopic pregnancy in 6 (5.21%) cases and hyperemesis gravidarum in 11 (9.56%) cases. In case of ectopic pregnancy about half of cases i.e. 3 (50%) were associated with infection, while 1 (16.66%) case had previous surgery (Table II).

Twenty two (19.13%) patients responded to conservative therapy while 69 (60%) patients were treated by minor surgical procedure and 12 (10.43%) patients had laparotomy.

Outcome of early pregnancy complications was psychological upset in 72 (62.1%) cases, infection in 51 (44%) cases, anaemia in 92 (79.3%) cases, coagulopathy in 9 (7.8%) cases, and septicaemia in 6 (5.2%) cases.

DISCUSSION

Early pregnancy complications are most commonly encountered during first trimester and abortion being the commonest one 88 (76.52%). This study shows that mean age for abortion was 29.45 years; according to the abortion surveillance report in the United States 50% of abortion occurred at under 25 years.8 The frequency of risk factors in abortion was higher, found in 51 (57.95%) cases. Underlying risk factors found in abortion were antiphospholipid syndrome in 5 (5.68%) cases, Diabetes mellitus in 8 (9.09%) cases, hypertension in 16 (18.18%) cases, polycystic ovarian syndrome in 11 (12.5%) cases and infection in 11 (12.5%) cases. Other complications were gestational trophoblastic disease in 10 (8.69%) cases, ectopic pregnancy in 6 (5.21%) cases and hyperemesis gravidarum in 11 (9.56%) cases. In case of ectopic pregnancy about half of cases i.e. 3 (50%) were associated with infection, while 1 (16.66%) case had previous surgery (Table II).

Pelvic inflammatory disease was found in 12.5% cases in comparison with Wamwana et al. where inflammatory disease was a common risk factor for abortion in 43% cases.10 This vast difference could be due to social and cultural attitude. Polycystic ovarian syndrome was another high risk factor found in abortion (12.5%); same is reported by Cockseje et al.11 Pregnancy failure in cases of polycystic ovarian syndrome is because of excessive androgens or obesity. Antiphospholipid syndrome
was found less significant risk factor in cases of abortion i.e. (5.68%). This is in contrast with Cervera et al. Study where antiphospholipid syndrome was highly associated with early pregnancy loss.12 This needs further work-up in our part of world to find the actual prevalence of antiphospholipid syndrome and its complications. The hinderance in this regard are the cost of investigations, poor latency rate and lack of awareness in patients.

In this study, most of the women who came with threatened abortion were successfully treated by conservative management like treatment of underlying medical problem and progestogen supplement. The role of progesterone in preparing the uterus for implantation of the embryo and its role in maintaining the pregnancy has been known for long-time.13

Those women who had incomplete abortion or missed abortion underwent mostly surgical evacuation i.e. 69 (60%) cases. Same is reported by Petrous et al.14 Nanda et al.6 and the European study.15 Evacuation with vacuum aspiration is a safe alternative.16 In this study, 12 (10.43%) cases had medical abortion. Vaginal misoprostol is found to be an effective treatment in cases of ectopic pregnancy accounted for 6 (5.21%) cases, pelvic inflammatory disease was found in (50%) cases of ectopic pregnancy, which is consistent with the study by Menon et al.19

Hyperemesis gravidarum is a frequent pathology and can be the cause of serious neurological complications.20 The present study also showed a high frequency of hyperemesis gravidarum but in majority of cases no underlying risk factor was found. Early vitamin supplementation is helpful in pregnancy-related hyperemesis.21

The different outcome measures found were the psychological upset in (62.1%) but all those patients had mild depression. For that they were well counseled and reassured. No major psychosis or other problems were found, while the anaemia (79.3%) and coagulopathy (7.8%) were due to blood loss as well as infection and were managed accordingly.

Infection rate was found very high i.e. 44% same is reported by Nanda et al. and Sturchler et al. where the infection rate was high following surgical emptying of uterus.6,22 The reason could be due to the late referral to tertiary hospital after manipulations in this study.

**CONCLUSION**

Abortion was found to be the most frequent early pregnancy complication with many risk factors commonest being hypertension. Outcome was anaemia, psychological upset and infection. Early diagnosis of risk factors and their prompt treatment is likely to improve the outcome.

### REFERENCES


