Case Report

Successful Pregnancy in a Patient with Eisenmenger's Syndrome

Saadia Saleem, Sumera Tahir

Abstract

Pregnancy with Eisenmenger's syndrome having high maternal mortality as pulmonary hypertension is aggravated often leads to poor outcome. But a multidisciplinary approach and close follow up can achieve a good maternal and fetal come. Here we report a case of successful pregnancy in a patient with Eisenmenger's syndrome. **Key Words:** Eisenmenger's, syndrome, pulmonary hypertension, successful pregnancy

INTRODUCTION

Eisenmenger Syndrome (ES) is defined as pulmonary hypertension as result of uncorrected left to right shunt of ventricular septal defect, atrial septal defect or patent ductal arteriosis, with subsequent shunt reversal and cyanosis. Maternal mortality with Eisenmenger's syndrome is as high as 40% in pregnancy and approaching to 70% with caesarean section[1]. Because of extreme maternal risk few case reports are seen in literature with good maternal and fetal come. In the following, we report a case of successful pregnancy with ES. It emphasizes that, a team approach and close follow up can achieve a more optimistic outcome.

CASE REPORT

A 20 years old primigravida reported for the first time for routine antenatal checkup with diagnosed case of Eisenmenger syndrome at outdoor of Allied Hospital, Faisalabad in 16-08-2010. At that time she was 31 weeks pregnant and had slight limitation of physical activity (NYHA class-II). General physical examination was normal except cyanosis was there. Obstetrical examination showed that fetus is alive and small for gestational age.

Doppler obstetric scan revealed growth lag of 3 weeks and oligohydramnios but normal S/D ratio. She was advised admission but refused and again visited on 14-09-2010 at 33 weeks gestation. Now she was admitted for strict fetomaternal surveillance. She was taking loprin, Herbesser and spiromide. Consultant cardiologist advised administration of high concentration oxygen and echocardiography but anticoagulant was not advised. Echocardiography showed large ASD (36mm), right to left shunt and pulmonary artery pressure of 85/16 Obstetrics scan revealed intrauterine growth restriction with severe oligohydramnios. She was normotensive, cyanosed, had no basal crepitations and was classified to be in NYHA class-II. She underwent elective lower segment caesarean section and tubal ligation due to intra uterine growth restriction by consultant obstetrician under epidural anaesthesia. A female baby of 2 kg weight with good apgar score was delivered and was examined by Pediatrician. Intra-operative and postoperative period was uneventful. She remained vitally stable oxygen saturation was 78-85%. So high O_2 concentration 5L/min was given. Strict I/V fluid record with CVP line to avoid pulmonary edema. Later on she was shifted to intensive care unit for 48 hrs for strict monitoring. She remained stable, post OP recovery was uneventful. She breastfed her baby and discharge on 10th day. She visited OPD 8 week after delivery. She was taking drugs as advised by cardiologist and felt well.

DISCUSSION

Eisenmenger's syndrome is a congenital cyanotic heart disease (CHD). Women with CHD now account for 70-80% of patients seen in pregnancy. Between 15-52% of cardiac abnormalities are first diagnosed during pregnancy[2].

Systemic vasodilatation is physiological adaptation in normal pregnancy and associated with increase in plasma volume and cardiac output. In ES there is pulmonary hypertension as result of uncorrected left to right shunt with subsequent shunt reversal and cyanosis. As peripheral vascular resistance falls in pregnancy, patients with ES may worsen the right to left shunting and exacerbates the pre-existing hyoxia, which may cause severe pulmonary hypertension. The decrease in systemic vascular resistance and increase in blood volume can lead to right heart failure and sudden death. In addition sudden death may also occur due to thromboembolism[1]. As there is high maternal mortality in ES, so pregnancy should be avoided. If occurs, termination of pregnancy is strongly recommended. For patients with continuing gestation, hospitalization in third trimester is highly suggested[3]. Management involves anticoagulation, avoiding increase in pulmonary vascular resistance and maintaining right and left ventricular contractility[4].

Regarding anticoagulation it is still controversial. Wang H et al[5] reported that, in pregnant women with ES anticoagulation should be avoided. Hypovolemia due to postpartum haemorrhage is very dangerous to such patients may result in death. Intrauterine growth restriction and congenital heart disease (5%) are main fetal complications. Despite this neonatal survival rate approaches 90% [6].

Vaginal delivery may be better, as operative abdominal delivery has high mortality[8]. Anaesthesia for patients with ES is controversial. Some authors have used general anaesthesia[7] while others have suggested epidural[9]. As in our case epidural anaesthesia was used. Whatever regional or general in used, the risk of hypotension should be avoided. The use of epidural or intrathecal morphine sulphate, a technique devoid of effect on systemic blood pressure, may be the best approach for these patients.

It is concluded that, successful pregnancy can be achieved in patients with Eisenmenger syndrome with team approach and close follow up.

REFERENCES

1. Tomlinson ME. Cardiac disease In: HIGH RISK PREGANNCY, management options: 4th ed. Elsevier: saunders, 2011; 627-655.
2. Gei AF, Hankins GD. Cardiac disease and pregnancy. Obstet Gynaecol Clin North AM 2001; 28:465-512.
3. Weiss BM, Hess OM. Pulmonary vascular disease and pregnancy: current controversies, management strategies and perspectives. Eur Heart J. 2000; 21:104-15.
4. Van Mook WNKA, Peeters L. Severe cardiac disease in pregnancy, Part II: impact of congenital and acquired cardiac diseases during pregnancy. Curr Opin Crit Care 2005; 11:435-448.
5. Wang H, Zang W, Liu T. Experience of managing the pregnant women with Eisenmenger's Syndrome: maternal and fetal outcome in 13 cases. J Obstet Gynaecol Res 2011; 37:64-70.
6. Weiss BM, Zemp L, Seifert B, Hess OM: outcome of pulmonary vascular disease in pregnancy: A systemic overview from 1978 through 1996. J Am Coll Cardiol 1998; 31:1650-1657.
7. Gilman DH. Caesarean section in undiagnosed Eisenmenger's syndrome. Report of a patient with fetal outcome 1991; 46:371-3.
8. Makaryus AN, Forouzesh A, Johnson M. Pregnancy in patient with Eisenmenger's syndrome. Mt Sinai J Med 2006; 73:1033-6.
9. Pollack KL, Chestnunt DH, Wenstrom KD. Anaesthetic management of a parturient with Eisenmenger's syndrome. Br J Anaesth 2001; 86:723-6.

AUTHORS

- **Dr. Saadia Saleem**
  Senior Registrar Gynecology & Obstetrics
  Allied Hospital, Faisalabad.
  Email: dr_sadiasaleem@yahoo.com
- **Dr. Sumera Tahir**
  Associate Professor Gynecology & Obstetrics
  PMC/Allied Hospital, Faisalabad
  Email: razatahir@hotmail.com