CASE REPORT

ROLE OF MULTIDISCIPLINARY TEAM MANAGEMENT IN WOMEN WITH PLACENTAL CHORIOANGIOMA AND VALVULAR HEART DISEASE

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ABSTRACT

Chorioangioma, a non-trophoblastic benign tumor without any malignant tendency, originates from the placenta and can affect fetal outcome. The diagnosis is usually made in the second trimester of pregnancy. The tumor is usually on the fetal side in close connection to the umbilical cord site and protrudes into the amniotic cavity. These can either be small (less than five centimeters) or large (more than five centimeters) tumors with favorable and unfavorable fetal outcomes, respectively. The larger tumor can cause preterm labour, placenta previa, pre-eclampsia, polyhydramnios, hemorrhage in mothers. At the same time, fetus complications can include growth restriction, thrombocytopenia, cardiomegaly, anemia, fetal hydrops, etc. The diagnosis can be made earlier by using color Doppler and earlier intervention can be done through multidisciplinary team management to reduce maternal and fetal complications. Here, presenting a case report of a pregnant patient with Rheumatic heart disease having Chorioangioma of size 5.0x3.0 cm diagnosed at nineteen weeks at the time of anomaly scan. She was kept for regular follow-up until 33 weeks when the umbilical artery Doppler scan revealed absent end diastolic flow and emergency LSCS was performed under steroid cover. A female baby was born with a birth weight of 1.8 kg (low birth weight) and admitted to the neonatal unit. At the same time, mother was taken to CCU and remained there for fifteen days under extensive treatment by the multidisciplinary team including cardiologist, intensivist and internal medicine specialist. The multidisciplinary team management increased the maternal as well as fetal outcome.

Key Words: Pregnancy, Placenta, Heart disease

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INTRODUCTION

The most common tumor of benign nature among pregnant women is Chorioangioma and could be one of the reasons for poor fetal outcome. The non-trophoblastic cancer presents in approx. 0.6-1% pregnancies.[1,2] The usual diagnosis period is within the second trimester and found among women with either multiple pregnancies or having female fetuses. The location is usually on fetal side of placenta.[3]

The size of these benign tumors may be small or large with favorable and unfavorable outcomes.[4] Large tumors impart more threat to the fetus and in some cases to the mother if female is also suffering from other diseases like Valvular heart disease or other chronic disease of severe nature. The result could be complications in both mother as well as fetuses.[5]

Valvular heart disease is also common among women of reproductive age in developing countries. This life-threatening condition might also induce complications such as arrhythmias, cardiac failure and thromboembolic complications among 65 to 70 percent women and in 3 to 5 percent cases mortality may occur during

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pregnancy.[6,7] There might be risk of admission in cardiac care unit. Sometimes medical and surgical intervention is needed in such women if symptoms persist despite their proper clinical management to improve fetal and maternal outcomes.[8]

We will present a rare case of a large chorioangioma and underlying Valvular heart disease that was monitored throughout her pregnancy after her presentation till outcome by involving a multidisciplinary team of better maternal and fetal outcomes.

Case Report

A female patient aged 28 years with a body mass index of 27 Kg/m^2. The obstetric history showed a previous history of perinatal loss and premature birth and operative delivery at 34 weeks due to intrauterine growth retardation (IUGR). While her medical history showed that she was a known case of moderate to severe mitral regurgitation, moderate aortic regurgitation and mild to moderate pulmonary hypertension with no comorbidities like diabetes, hypertension, and arrhythmias. The pregnancy was unplanned and she developed mild anemia in her second trimester but was later booked to the maternity hospital at 19-20th week of gestation. An anomaly scan was done in the 19th week and the radiologist noted a hypoechoic mass in the placenta measuring 5.0x3.0 cm (Figure 1).

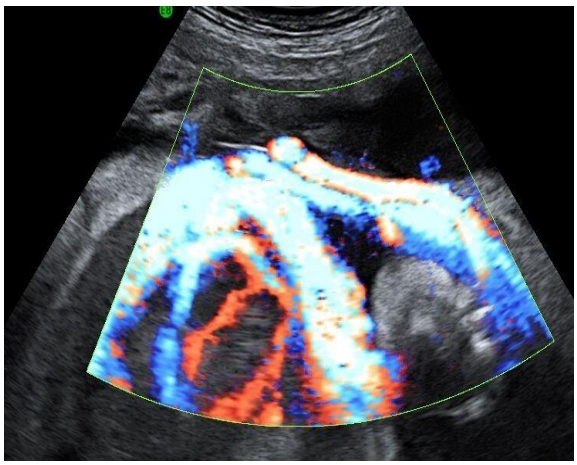

Figure 1: Color Doppler (Placental Chorioangioma)

The patient was planned to have monthly antenatal visits till 28th week and then fortnightly visits till delivery of the baby. The follow up scan showed the mass increased in size to 8.0cm and developed IUGR. The estimated amount of liquor was dropped with severe Oligohydramnios (noted at 32 weeks) (Figure 2).

Figure 2: Macroscopic view (Placental Chorioangioma)

During her pregnancy, she was looked after by a senior cardiologist and was given Aspirin, beta blockers and diuretics were added later. Twice she was admitted in cardiac emergency because of shortness of breathing and palpitations. Using an umbilical artery Doppler scan at 33 weeks, consultant radiologist found that end diastolic flow was absent . After steroid cover, emergency LSCS was done at 33 weeks. As a result, an alive female baby weighing 1.8 kilogram with grade two meconium was delivered and admitted to neonatal intensive care unit (NICU). At the same time, mother developed pulmonary edema, severe shortness of breath (SOB) and was shifted to CCU for further management. In CCU, close monitoring was done, cardiologists and intensivists were engaged and they provided extensive treatment for pulmonary edema. Patient remained under observation for fifteen days and then discharged with continuous advice of follow-up.

DISCUSSION

Chorioangioma arises from the chorionic tissue having vascularization through proliferation of vessels in the second week of fertilization that continues to grow and is usually detected in the second trimester. The usual place of presence is umbilical cord of fetal side protruding into the amniotic cavity.[9] Macroscopically, these tumors are purplish red, well circumscribed with soft and dark cut surfaces of red to tan color. When seen microscopically, it is divided into three major types, cellular, degenerative and angiomatous. The last type is the most common one i.e. angiomatous. It comprises mostly increased blood vessels and capillaries with endothelial tissue areas surrounded by the placental stroma.[10]

The World Health Organization (WHO) modified the classification of pregnancy risk diseases and designated Valvular heart disease as class IV risk for pregnancies. For such cases the surgical intervention during pregnancy in the developing world is regularly practiced among symptomatic patients in those hospitals where facilities for cardiac surgeries are found only. [11]

The maternal and fetal outcomes are severely disturbed by the occurrence of such tumors like chorioangiomas and if certain chronic conditions are already present among the women like Valvular heart disease. In such cases the only condition that can help change unfavorable outcomes to favorable ones is continuously looking after the mother and fetus throughout that period by engaging a multidisciplinary team with expertise from various disciplines so that management of cases could be optimized accordingly. In absence of such teams the management becomes very difficult that might result in the loss of mother and fetus. The time and mode of delivery also becomes challenging and the new born babies might have certain conditions that need their admission to the NICU for management. Moreover, mothers may also need intensive care treatment to manage arising situations in case of severe impact due to large size tumors and the underlying disease. In our case report, the multidisciplinary team managed the woman well in time against the arising conditions from delivery till safe hospital discharge as well as female born in the NICU. So, it is always necessary to engage the multidisciplinary team to manage complicated cases to have favorable outcomes.

CONCLUSION

There are serious adverse effects related to chorioangiomas that alter the pregnancy outcomes. The larger the tumor, higher the risk of poor outcomes. Close monitoring and time management through engaging multidisciplinary teams significantly reduces the chance of poor outcomes and converts them into favorable outcomes at maternal and fetal levels.

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AUTHOR'S CONTRIBUTION

SN: Manuscript writing, patient monitoring and outcome
S: Manuscript writing and results compiling
AR: Final review

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