Multidisciplinary Care Base Approach to Adult Congenital Heart Disease

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More and more children with Congenital Heart Disease (CHD) both corrected and uncorrected are reaching child bearing age. Heart failure and arrhythmias during pregnancy can lead to worsening of the cardiac condition. A multidisciplinary team approach is necessary to address ACHD pregnancy.

In the Registry on Pregnancy and Cardiac Disease (ROPAC), a 10 year review documented 5,739 pregnancies in 53 countries with 3,295 women had CHD and 1,059 of whom were uncorrected cases.

The hemodynamic changes during pregnancy with increased oxygen consumption, increase plasma volume, increase heart rate, increase cardiac output and the resulting hypercoagulable state warrants cardiac assessment which include preconception counseling, diagnostic tests, estimating maternal risk, fetal risk and genetic counseling.

Women with significant heart disease should be managed jointly by an obstetrician and a cardiologist with experience in treating pregnant patients with heart disease early in pregnancy. All women with heart disease should be assessed at least once before pregnancy, during pregnancy and hospital delivery should be advised. Preconception diagnostic evaluation includes a thorough history and physical examination, laboratory tests, EKG, Echocardiogram, exercise testing, Chest x-ray, elective hemodynamic studies in selected cases to be able to estimate the maternal risk of pregnancy. Several methods maybe used to assess maternal risk and estimating the fetal risk is likewise essential.

Today I will be presenting a 20 y/o female diagnosed case of Univentricular Heart with double inlet left ventricle s/p Glenn procedure in 2003 and s/p Fontan procedure in 2011, planning for pregnancy.

Based on the modified WHO classification of maternal cardiovascular risk, our patient is risk class III and careful assessment pre-pregnancy is indicated and close follow up of the patent is essential. Cardiac and obstetric monitoring is needed throughout pregnancy, childbirth and puerperium. Comprehensive cardiovascular examination to detect arrhythmias, new murmurs or clinical evidence of heart failure is needed at every visit. Echocardiogram per trimester is indicated as well as Fetal echocardiogram at 18-22 weeks. An initial multidisciplinary planning meeting should be organized once fetal viability has been established usually after week 23-24 and specific delivery plan is outlined. Vaginal delivery with epidural anesthesia is preferred and C-section is reserved for obstetrical reasons. A detailed outlined intrapartum and postpartum care is warranted.

Congenital Heart Disease and pregnancy is compatible if properly planned and managed by a multidisciplinary group of specialist adept in the care of this growing set of patients.