PREVALENCE OF INTRAUTERINE DEMISE IN FETUSES WITH CONGENITAL HEART DEFECTS: 12-YEAR PROGRAMMATIC REVIEW

Poster Contributions
Poster Sessions, Expo North
Saturday, March 09, 2013, 3:45 p.m.-4:30 p.m.

Session Title: Congenital Cardiology Solutions: Prenatal Diagnosis, Coronary Anomalies and More
Abstract Category: 13. Congenital Cardiology Solutions: Pediatric
Presentation Number: 1162-129

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Background: Congenital heart defects (CHD) are amongst the most common birth defects and impact ~1% of all babies born in this country. Intrauterine demise (IUFD) in the fetus with CHD is reported to occur at higher rates than the overall population incidence of 6 per 1000 births. As such, fetal CHD is often considered a medical indication for early delivery. However, the advantages of a mature and larger neonate are well described in congenital heart surgery. To inform this risk/benefit discussion, we aim to determine contemporary IUFD rates in the fetus with CHD. We hypothesize that the fetus with isolated CHD is not at increased risk of IUFD.

Methods: We identified all women who underwent fetal echocardiography at our institution from 1998 to 2010. Data was obtained regarding the presence of extracardiac anomalies, confirmed genetic diagnosis, pregnancy outcome and post-natal cardiac diagnosis. Fetuses with minor defects (e.g. small VSDs, isolated LSVC) and complications of twinning (e.g. conjoined twins, twin-twin transfusion syndrome) were excluded. Cardiac diagnoses were grouped into 8 basic categories. Fisher’s exact test was used to compare pregnancy outcome by risk groups.

Results: Out of 500 fetuses with prenatal diagnosis of significant CHD, 21 (%) experienced IUFD, 15 (3%) underwent termination, and 431 (86%) were confirmed live deliveries. 27 (5%) pregnancy outcomes remain unknown. In those fetuses with IUFD, 4 (19%) had a confirmed genetic diagnosis, 11 (52%) had confirmed extracardiac anomalies, and 6 (29%) had severe valvar regurgitation (5 Ebstein’s anomaly, 1 tetralogy of Fallot with absent pulmonary valve). Genetic diagnosis remained unknown in 17 cases of IUFD. Extracardiac anomaly (p < 0.000018) and genetic diagnosis (p < 0.003) were associated with IUFD but category of CHD was not.

Conclusion: In isolated fetal CHD without severe valve regurgitation, the risk of IUFD does not exceed that of the general population. As such, early delivery to avoid the risk of IUFD is not indicated for most fetal CHD. These findings inform the ongoing risk/benefit discussion of scheduled delivery in this population.