**PRENATAL TRANS-PLACENTAL DIGOXIN THERAPY FOR FETAL HEART FAILURE: A COHORT STUDY**

**K.Y. Zhou**, C. Wang, Y.F. Li, Y.M. Hua

Department of Pediatric Cardiovascular Disease, West China Second University Hospital, Sichuan University, Chengdu, Sichuan, China

*Objective*: Study the clinical efficacy and safety of transplacental digoxin therapy for fetal heart failure.

*Methods*: Fetal heart failure cases, diagnosed during May 2008 to December 2014, were enrolled in this case-control study. The subjects were divided into digoxin group (Dig group) and control group (Con group). Fetal CVPS and ventricular Tei index were dynamic monitored, pregnant outcomes were observed and recorded.

*Results*: Fourteen cases of fetal heart failure were enrolled in Dig group, including 5 fetal SVT, 5 fetal AF, 3 fetal anemia (MA) and 1 fetal dilated cardiomyopathy (DCM). Fetal heart failure was gradually controlled in AF, SVT and MA fetuses with transplacental digoxin therapy. These cases achieved uneventful post-therapy pregnancy and full-term delivery. CVPS increased gradually, at or near the 10 points, left and right ventricular Tei index decreased gradually, closed to normal range. 10 to 55 months follow-ups have been finished, evaluation from Bayley Scale of Infant Development（BSID）revealed the normal growth and development of physique and mentality in all the enrolled children. Twelve cases of fetal heart failure cases were enrolled in Con group, including 5 AF, 4 SVT, 2 MA and 1 case of fetal cardiomyopathy. Among these cases in Con group, fetal right ventricular Tei index decreased gradually, the value is 0.48±0.05 at 20 GW and decreased to 0.38±0.04 before delivery.

*Conclusions*: With the alleviating of fetal heart failure, CVPS increased and ventricular Tei index decreased. CVPS and Tei index can effectively guide the prenatal transplacental digoxin therapy for fetal heart failure. Timely and effective prenatal intervention can significantly improve the prognosis of the suffered fetuses.