In general, previous epidemiological studies evaluated congenital heart defects cases (CHDs) together. However, different CHD-entities have different etiology, thus the concept of our project is to evaluate separately different CHD-entities as homogeneously as possible. The aim of this study is to evaluate the birth outcomes of 4 different types of conotruncal defects (CTDs), i.e. common truncus (truncus arteriosus), transposition of great arteries, tetralogy of Fallot, and double-outlet right ventricle.

Medically recorded birth outcomes of 597 live-born CTD cases and 38,151 population controls without any defects were compared in the population-based large dataset of the Hungarian Case-Control Surveillance of Congenital Abnormalities completed by socio-demographic variables of their mothers. Birth outcomes of male and female cases were also compared with male and female population controls.

There was a male excess in CTD cases (56.9%) with the same mean gestational age (39.4 vs. 39.4 wk) and preterm birth rate (8.2% vs. 9.2%), but their mean birth weight was smaller (3,077 vs. 3,276 g) with a high rate of low birthweight (14.6% vs. 5.7%) compared to the birth outcomes of population controls. These data indicate intrauterine growth restriction of fetuses affected with transposition of great arteries, tetralogy of Fallot, and double-outlet right ventricle particularly in females, while there were a shorter mean gestational age and smaller mean birth weight in common truncus cases.

In general fetal CTD, except common truncus, had no effect for gestational age at delivery but CTD associated with a high risk for intrauterine fetal growth restriction particularly in female cases.