Analysis of the intrauterine and postnatal course of neonates with congenital truncus arteriosus communis

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Objective
Truncus arteriosus communis (TAC) is a very rare congenital heart defect which occurs in less than 4% of all congenital heart defects (CHD). Newborns with TAC have one common trunk over a septal defect. The aim of this study was to analyze the intrauterine and postnatal course of this newborns.

Methods
Retrospective study of all cases of TAC evaluated prenatally and treated postnatally in four centers between the years 2008-2021.

Results
The maternal age varied from 17-39 years, the average was 30 years and on average the CHD was diagnosed in the 24th week of pregnancy. The most watched TAC-type was type A1 (47.2%), followed by A2 (36.1%), A4 (11.1%) and A3 (5.6%). In 15 cases chromosomal abnormalities have been reported: 9 had a DiGeorge-syndrome, 4 a trisomy 13, one patient had a trisomy 18 and one patient had a duplication on the Y-chromosome in the 12th band. Looking at further anomalies 22 patients had such anomalies. A thymic aplasia (15.2%), a hexadactyly (8.7%) and a singular umbilical artery (6.5%) were observed most often. Other anomalies were observed, each occurring only once. 31 patients underwent surgical correction, on average they were 16 days old at the first surgery (Range 16-71 days).

Conclusion
TAC is a severe and rare CHD which seems to be independent of the maternal age or the gender of the fetus. It often occurs in connection with a DiGeorge-syndrome and other anomalies. Despite the observations that most patients have a good prognosis through surgical correction, the pregnancies are often terminated.