Objective
Twin reversed arterial perfusion (TRAP) is a rare complication of monochorionic twin pregnancies, involving an acardiac twin and an otherwise “normal pump” co-twin.

Methods
14 of TRAP (twin reverse arterial perfusion) sequence pregnancies identified at our Department from 2006 to 2015 were included in the study. In 14 cases, TRAP sequence occurred in monochorionic, monoamniotic pregnancies; in 1 case – in a quadruplet pregnancy with TRAP and TTTS. Eleven cases were treated with fetoscopic laser cord occlusion. Four cases were managed conservatively: in two cases there were no signs of cardiac failure in the pump-twin and the diagnosis was made late in pregnancy and in the other two cases, additional defects in pump-twin were diagnosed (1xCHD/TAC; 1xCHD/VSD + aorta overriding, skeletal and urinary tract malformations).

Results
In the ECHO examination functional disorders in the circulatory system were stated in nine pump-twins (9 x cardiomegaly, 7 x hypertrophy of myocardium, 6 x regurgitation of the tricuspid valve, 3 x decreased contractility of the right ventricle). In two cases a slow regression of these disorders was observed after intrauterine intervention, an additional treatment with Digoxin in these two cases was applied. In one fetus an evolutive form of stenosis of pulmonary valve was identified. In the quadruplet pregnancy intrauterine death of all the fetuses occurred in 21 weeks’ gestation. The patients who underwent the therapy delivered via cesarean section; in 5 cases a preterm birth occurred (between 31 and 36 weeks), mean weight of the newborns was 2190g(1000-3000), median Apgar score was 9 points(6-9).

Conclusion
Detailed echocardiographic examination of the pump-twin is necessary not only to estimate the degree of cardiac failure but also to identify the possible structural defects among which cardiac defects are the most common. Fetoscopic laser cord occlusion is an effective method to prevent the development of cardiac failure in the pump twin.