A case of twin reversed arterial perfusion sequence: successful management with spontaneous cessation of flow
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Objective
We report the clinical course of twin reversed arterial perfusion sequence diagnosed in the first trimester.

Methods
Case report.

Results
Twin reversed arterial perfusion (TRAP) sequence is a rare and unique abnormality of monochorionic twins with the incidence of 1 in 35,000 births. It is associated with increased perinatal mortality rate due to cardiac failure and polyhydramnios related to preterm birth and congenital anomalies. Conservative management is suggested to be reasonable in mild cases. Here, we present a case with successful management till term. 26 year old patient (gravid: 3 para: 1 abortus: 1) was referred to our clinic for pregnancy follow up. Ultrasonographic examination revealed monochorionic diamniotic twin pregnancy at 8 weeks of gestation (Fetus 1: CRL: 16.4 mm; 8w0d; fetal cardiac activity present / Fetus 2: CRL: 8 mm; 6w5d; fetal cardiac activity not visualized). On the visit at 12th weeks of gestation, ultrasonographic findings were: Fetus 1: CRL: 65mm(12w6d, NT 1, 5 mm), cardiac activity present / Fetus 2: CRL: 53 mm(11w6d) without any cardiac activity. Reverse arterial blood flow to the second fetus was observed. Patient was followed up on weekly basis. Spontaneous cessation of blood flow was demonstrated on 19th week. Anatomical survey of the pump fetus revealed normal findings. Echocardiographic evaluation was also performed and there were no signs of cardiac failure. Fetal biometry and doppler studies were normal during follow up. On 38th week of gestation she was admitted to labor ward due to contractions. A male fetus of 2390 grams with Apgar score of 10 at 5 minutes was delivered.

Conclusion
Conservative management with close surveillance appears to be safe in mild cases of TRAP sequence. Clinical desicion taking can be guided by prognostic factors such as spontaneous cessation of blood flow, weight ratio of pump and acardiac twin and signs of cardiac failure in pump twin. In a retrospective review of 24 cases with TRAP sequence, Lewi et al (2010) had five cases with spontaneous cessation of flow to the acardiac twin. Only 2 of them were carried to term. Also overall survival rate was 46%. Given these high rates of perinatal mortality and low incidence of this sequence, we conclude that our case contributes to the literature one case with successful management.