Introduction
To illuminate the placenta perfusion status in monochorionic twin after intrauterine fetal demise of one fetus.

Methods
Monochorionic (MC) twin cases with spontaneous and post-laser fetal demise or fetal reduction by radiofrequency ablation (RFA) delivered during the period of Mar 2015 to Mar 2018 were recruited for the study. All the recruited placentas were studied by perfusion with the mixture of vinylidene chloride and self-curing denture acrylic and later by corrosive cast.

Results
A total of 11 cases were recruited for the study, including 8 post-RFA cases, 2 spontaneous fetal demise cases, and 1 post-laser fetal demise. The gestational ages at time of RFA was 18.8 ±8.0 weeks, and the gestational age at birth was 37.3±7.4 weeks.

The interval between RFA and delivery was 18.3±3.9 weeks. Of the 11 cases, placental reperfusion can be detected in 6 cases. Only the reperfusion placentas had both Artery-to-artery (AA) and vein-to-vein (VV) anastomoses, whereas one case with only AA did not have reperfusion. All the TTTS cases showed no reperfusion.

Conclusion
Placental reperfusion after IUD of one fetus in MCDA twins is highly dependent on the type of anastomoses, and is only seen in cases with both AA and VV anastomoses between the two fetuses.