Therapeutic selective fetocide in DCDA twins with preterm premature rupture of membranes in one sac
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Objective
Most dichorionic twin pregnancies complicated by preterm premature rupture of membranes (pPROM) in one sac result in spontaneous delivery of both fetuses after a short latency period. The common management in most centers of twin pregnancies with pPROM is either termination or expectant management. However, both can result in an increased rate of fetal and neonatal morbidity and mortality of the twins. There are also very few studies involving selective fetocide of dichorionic twins with pPROM with the aim to improve the pregnancy outcome. Our study was to evaluate the perinatal outcome of selective fetocide in dichorionic twins with pPROM in one sac.

Methods
A retrospective cohort study of five dichorionic twin pregnancies with pPROM in one sac having selective feticide between January 2012 to June 2014, were analysed in the Fetal Medical Center, the First Affiliated Hospital of Sun Yat-sen University. Intra cardiac injection of potassium chloride were used for transabdominal selective feticide. We analyzed gestational week at pPROM and feticide procedure; maternal body temperature, leukocyte count and C reactive protein (CRP) as well as procalcitonin (PCT) for signs of intrauterine infection and the outcome of the surviving twin in these pregnancies.

Results
All pregnancies were conceived by assisted reproductive techniques (IVF/ICSI). The mean gestational age at pPROM was 18.2 weeks (13-27 weeks), and the mean time interval from pPROM to selective feticide was 27 days (6-42 days). Pregnancies were successfully prolonged beyond 37 weeks and live fetuses delivered in 3 cases (60%), 2 cases were fetal loss (40%) because of suspected intrauterine infection (one was medically terminated 2 days after feticide, and the other was spontaneous miscarriage 13 days after).

Conclusion
Selective feticide of the fetus with pPROM in DCDA may stop the fluid leakage, so the uterine-cervical-vaginal tract can be closed. Stopping the amniotic fluid leakage by feticide can lower the risk for infection. The long time interval between pPROM to selective feticide may increase the risk of intrauterine infection and miscarriage. However, we still regard that selective feticide is an option in the management of the dichorionic twin with pPROM in one sac, to improve the unfavorable pregnancy outcome of the unaffected twin.