

4540793 (EP04.33). Pregnancy outcomes after single day-5 blastocyst transfer versus double day-3 cleavage-stage embryo transfer in women with congenital duplex uterus

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Objectives

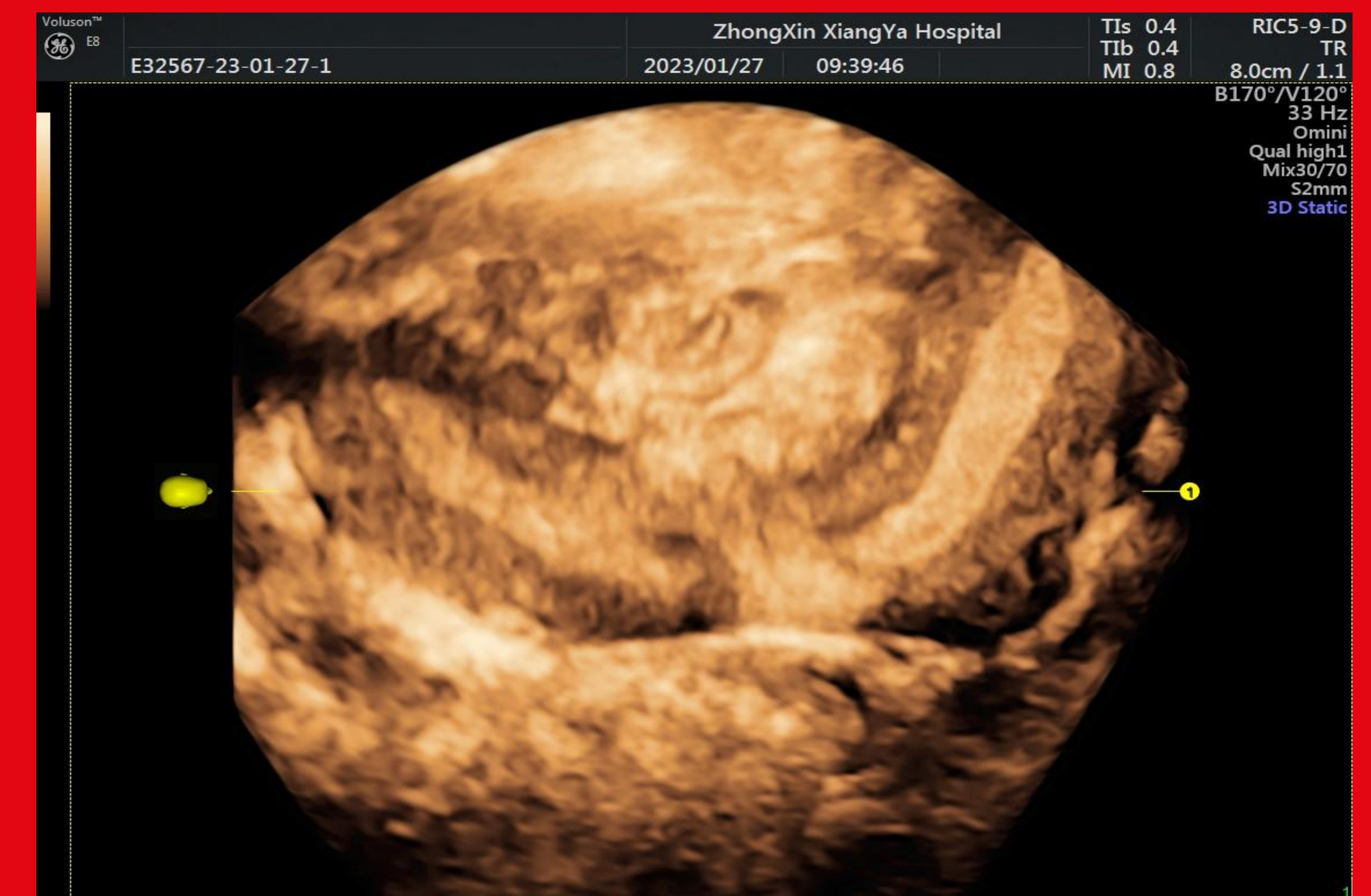
To compare pregnancy, obstetric, and neonatal outcomes between: Single blastocyst transfer (SBT) vs. Double cleavage-stage embryo transfer (DCT) in women with uterus didelphys undergoing their first embryo transfer during their first IVF/ICSI treatment cycle.

Methods

This retrospective cohort study included 213 women with uterus didelphys who underwent their first embryo transfer during their first in-vitro fertilization (IVF) or intracytoplasmic sperm injection (ICSI) cycle from 2004 to 2024. Patients were categorized according to their exposure: SBT (n=112) or DCT (n=101). The primary outcomes were implantation, clinical pregnancy, multiple pregnancy, and live birth rates. Secondary outcomes included mode of delivery, gestational age at delivery, preterm delivery, birth weight, and low birth weight (LBW). Multivariable logistic regression was utilized to adjust for baseline confounders.

Results

The clinical pregnancy (49.5% vs. 52.7%; $P=0.644$) and live birth rates (34.7% vs. 35.7%; $P=0.871$) were comparable between the DCT and SBT groups, respectively. However, the implantation rate per embryo was lower after DCT than after SBT (32.2% vs. 54.5%; $P<0.001$). Multiple pregnancy was significantly more frequent after DCT (14.9% vs. 1.8%; $P<0.001$), and this association remained significant after multivariable adjustment (adjusted odds ratio (aOR), 5.70; 95% confidence interval (CI), 1.32–41.52; $P=0.039$). Among liveborn neonates, DCT was associated with a lower mean birth weight (2.61 ± 0.78 kg vs. 2.97 ± 0.68 kg; $P=0.032$) and a higher LBW rate (44.2% vs. 12.2%; $P=0.001$), which remained significant after adjustment (aOR, 4.02; 95% CI, 1.19–16.39; $P=0.034$). The subgroup analysis evaluating only fresh transfer cycles corroborated these findings, maintaining comparable live birth rates (36.2% vs. 36.8%) while demonstrating a marked reduction in twin deliveries (20.6% vs. 4.8%) and LBW rates (41.5% vs. 18.2%) in the SBT group.



Conclusion

In women with uterus didelphys who undergo assisted reproduction, SBT achieves clinical pregnancy and live birth rates similar to DCT, while significantly reducing multiple pregnancies and LBW. These findings support the prioritization of SBT in this anatomically high-risk population.