RBMO

LETTER

Can miscarriage caused by delayed luteoplacental shift be avoided?

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I read with interest the article by *Neumann et al. (2020)* which showed that in anovulatory frozen embryo transfer (FET) using dydrogesterone instead of progesterone for luteal phase support, a significant increase in trophoblastic progesterone production occurs 23–29 days after embryo transfer in pituitary-suppressed women. When ovarian activity is not suppressed, the onset of placental progesterone production is accompanied by luteolysis, a phenomenon known as luteoplacental shift (LPS).

The authors noted that diminished placental progesterone production was detected in patients who eventually miscarried. I wonder if the treatment of these patients was modified in view of this negative outcome. In fact, oral dydrogesterone demonstrated non-inferiority to micronized vaginal progesterone for the presence of fetal heartbeat at 12 weeks' gestation (*Griesinger et al., 2018*). However, is this also true for pregnancies threatened by delayed LPS? If so, should an increase in daily dydrogesterone dose be considered to save these pregnancies?

With the use of customised oocyte donation enhancement (CODE) (*Tesarik, 2018*), we have shown that some oocyte-recipient patients, treated with a protocol similar to that of FET, need a continuous administration of progesterone far beyond the time of gestation at which LPS normally occurs. In addition, prolonged luteal phase deficiency can also occur in natural cycles (*Tesarik et al., 2019*). In both situations, pregnancy can be saved by appropriate modification of luteal phase support. Hopefully, the data reported by *Neumann et al. (2020)* will contribute to the further refinement of luteal phase support in patients at risk.

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