

Progesterone use in recurrent miscarriage

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Progesterone is essential to support early pregnancy. Both lutectomy before 7 weeks, and blocking the progesterone receptor with mifepristone cause abortion. Progesterone is responsible for endometrial ripening, possibly luteotrophic actions, and immune tolerance by affecting natural killer cells, and the cytokine interaction between mother and conceptus.

At present, there is no reliable diagnostic test of luteal deficiency. Progesterone is secreted in a pulsatile fashion, blood may be drawn for progesterone levels at a pulse peak or nadir. Additionally, low hormone levels may be a result of abortion rather than its cause. In blighted ova, or after embryonic death, the lack of villous circulation, causes hCG and progesterone levels to fall.

Daya et al, have performed a metaanalysis on the results of progesterone administration in recurrent miscarriage. The odds ratio for pregnancies reaching at least 20 weeks gestation was 3.09 (95% CI 1.28 to 7.42) indicating that progesterone may be beneficial. However, the assessed trials were not matched for prognostic factors affecting pregnancy outcome such as the number of miscarriages, 1o, 2o or 3o aborter status, and no correction was made for chromosomally abnormal pregnancies, all of which may act as confounding factors. It is now necessary to mount a randomized controlled trial of progesterone, administered prior to fetal demise, in recurrent miscarriage. However, treatment and placebo arms must be stratified for the number of previous miscarriages, 1o, 2o or 3o aborter status, maternal age etc. and the results corrected for fetal chromosomal aberrations. Until such a trial is mounted the use of progesterone supplements is empiric, but the evidence suggests that progesterone supplements are beneficial.