



## Efficacy of subcutaneous progesterone for priming endometrial receptivity.

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**Aims:** To assess the efficacy of a new aqueous progesterone formulation administered s.c. at inducing endometrial effects (predecidual changes) that reflect endometrial receptivity. Twenty-four subjects whose own ovarian function was suppressed and who received exogenous E2 (0.1mg/day, transdermally) were randomized to receive 25 or 50 mg/day of progesterone for 11 days and have an endometrial biopsy.

The main efficacy criteria for the new s.c. aqueous progesterone formulation was the treatment's ability at inducing predecidual changes in the endometrium. Efficacy parameters, the induction of secretory and predecidual changes, were assessed by 2 independent observers.

**Results:** 100% of the endometrial samples displayed secretory transformation and partial predecidual changes. At least 80% of the biopsies displayed full predecidual changes. These findings are comparable to those reported in the literature for other progesterone preparations which are efficacious at providing luteal support in ART. There was no difference between the 2 treatment doses in terms of mean decidual score and endometrial dating. This indicates that the lower dose, 25 mg/day, is the minimum effective dose for inducing the secretory transformation of estrogenised endometrium and prime the markers of endometrial receptivity.

**Conclusion:** the efficacy of the new s.c. aqueous progesterone formulation was demonstrated by documenting its ability at inducing predecidual changes and secretory transformation in 100% of endometrial samples. As these constitute the morphological markers of endometrial receptivity, the present results indicate that the new subcutaneous progesterone preparation is now ready to be tested for luteal support.

Similar results having been obtained with the 2 tested doses, we conclude that 25mg/day is the minimum effective dose of subcutaneous progesterone capable of priming endometrial receptivity.