The Use of Vaginal Progesterone Gel in a Large IVF Center

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Luteal phase supplementation with progesterone is common in most ART centers. In the past, progesterone has been usually administered by either the intramuscular (IM) or vaginal suppository routes (PV). Vaginal progesterone has the advantage of achieving high intrauterine concentrations via a first pass uterine effect.

Crinone® (Serono Laboratories, Norwell, MA) is a polycarbophil gel with progesterone and has the advantage of ease of administration and improved patient tolerance. In view of the potential advantages of Crinone®, we gradually introduced the product over a year beginning January 1998. IVF patients received FSH treatment with (most often) luteal Lupron® suppression. Patients received progesterone PV (usually 100 mg nightly), progesterone IM (50 mg daily), or Crinone® 8% (90 mg every night). All progesterone was started the day after the egg retrieval. The majority of pregnant IVF patients continued progesterone for 7-10 weeks gestation.

We retrospectively analyzed progesterone usage in 1,675 IVF cycles at Boston IVF from January 1 to December 31, 1998. We excluded donor egg cycles and patients who underwent freezing of all embryos to prevent hyperstimulation syndrome. Outcome parameters were clinical pregnancy as defined as a gestational sac on ultrasound and are expressed per cycle start. The usage of Crinone® increased from 21.7% (first quarter) to 50% (fourth quarter) during the study period. The clinical pregnancy rate for the first quarter (127/369, or 34.4%) was comparable to the last quarter (145/469, or 30.1%). The clinical pregnancy rate for cycles using Crinone® (198/673, or 29.4%) was comparable to patients not using Crinone® (320/1002, or 31.9%).

In view of the ease of administration and comparable pregnancy rates between vaginal gel and other forms of progesterone, we recommend Crinone® for luteal supplementation in patients undergoing IVF.