

**Ultra-Low Dose Lupron Flare Offers Improved Outcome for Poor Responders.**

K. M. Silverberg, R. A. Ormand, L. J. Hansard, T. Turner, J., Slapak, B. Williamson, T. C. Vaughn

Texas Fertility Center, Austin, TX.

**Objectives:** The poor responder represents a significant challenge to the contemporary ART program. Many alterations in stimulation protocols have been proposed for these patients, including high dose gonadotropin, low dose GnRH analogs, stimulation without GnRH analogs, and the addition of growth hormone. None, however, have proven to be reproducibly successful.

Preliminary data have suggested that the ultra-low dose Lupron flare (ULDLF) protocol may offer such patients an improved prognosis. This study was designed to prospectively evaluate this protocol in the poor responder.

**Design:** Prospective, sequential trial of the ULDLF in poor responders undergoing controlled ovarian hyperstimulation for IVF.

**Materials and Methods:** Fifty-three poor responders were treated with both late luteal Lupron (LLL) and ULDLF stimulation protocols. The LLL protocol was initiated with late luteal Lupron (0.5 mg QD). Once down-regulation was assured, the Lupron dosage was decreased to 0.25 mg QD and gonadotropin stimulation was begun. Patients on the ULDLF protocol were given 21 days of oral contraceptives (OCP). Three days following the last OCP, Lupron (40pg BID) was initiated. Two days later, gonadotropin therapy was initiated. In both protocols, Lupron and gonadotropins were continued until there were at least 2 follicles > 18 mm. Human chorionic gonadotropin (hCG) (10,000 IU) was then administered. Oocyte retrieval was performed 36 hours later, and the intrauterine transfer of hatched embryos was performed 75 hours following retrieval.

**Results:** Of those patients who completed both LLL and ULDLF cycles (n=23), there were no statistically significant differences between patients' responses in terms of days of stimulation, total dose of gonadotropin received, peak estradiol level, or number of oocytes retrieved. The clinical pregnancy rate in ULDLF cycles was significantly greater than that in LLL cycles (50% vs. 24%,  $p < 0.001$ ). The delivery rate was also significantly greater in ULDLF cycles (37.5% vs. 8.3%,  $p < 0.001$ ). The overall LLL cycle cancellation rate for poor responders was 22/59 (37.3%) The overall ULDLF cycle cancellation rate was 6/53 (11.3%). Thirty-five LLL patients whose cycles were cancelled prior to oocyte retrieval subsequently attempted ULDLF cycles. Twenty-one of these successfully completed their ULDLF cycle (60%), twelve achieved pregnancy (34.3%) and eight successfully delivered (22.9%).

**Conclusions:** The ULDLF affords the poor responder several potential advantages. First, patients who fail to get to oocyte retrieval with the LLL protocol have a significant likelihood not only of successfully completing a ULDLF cycle, but also of achieving pregnancy. More importantly, even poor responders

who can successfully complete a LLL cycle may benefit from the significantly higher delivery rate afforded by the ULDLF protocol