

Abstract:

To synchronize the baboon menstrual cycle and to compare different methods of ovarian stimulation for IVF in baboons. Prospective randomized study. Institute of Primate Research, Nairobi, Kenya. Ten female baboons were treated with an oral contraceptive (33 ± 8 days) and randomized for ovarian stimulation in two cycles. In cycle 1 (C1), baboons were stimulated as follows: clomiphene citrate (CC) for 5 days followed by antagonist (group CC-1, $n = 3$); recombinant gonadotropins (rGn: rFSH and rLH) with antagonist (group antagon-1, $n = 3$); and long GnRH agonist protocol (group LP-1, $n = 4$). After 1-month rest, in cycle 2 (C2), the baboons were stimulated as follows: CC for 8 days without antagonist (group CC-2, $n = 2$); short GnRH agonist protocol (group SP-2, $n = 4$); long GnRH agonist protocol (group LP-2, $n = 4$). Oocyte aspiration was performed 34–36 hours after injecting 5000 IU recombinant hCG; the oocytes were then fertilized. Main Outcome Measure(s) Oocytes retrieved and fertilization rate. Withdrawal bleeding occurred 4 ± 1 days after the cessation of the contraceptive. Ovarian stimulation using the different protocols resulted in the following mean numbers of retrieved oocytes: LP-1, $n = 19$; LP-2, $n = 19$; CC-1, $n = 4$; CC-2, $n = 4$; antagon-1, $n = 9$; and SP-2, $n = 14$. Fertilization by intracytoplasmic sperm injection varied (23%–54%). The baboon menstrual cycle can be synchronized using an oral contraceptive. A long GnRH agonist protocol for ovarian stimulation may be suitable for ovarian stimulation in baboons.