Abstract:

Sixty-three women had NORPLANT implants inserted during the first eight days of the menstrual cycle. Blood specimens were withdrawn at the time of insertion and every three days during one of the following months of observation; the first, third, sixth, ninth and twelfth month after insertion. Ten subjects were sampled at multiple times during implant use. A total of 83 months of observation was available. The serum concentrations of levonorgestrel (LNG), FSH, LH, prolactin (PRL), estradiol (E2) and progesterone (prog) were measured in each specimen. LNG concentration rapidly declined during the first 15 days of use, the decline became more gradual during the subsequent two weeks, and an almost steady level was reached during the remainder of the year. There were no significant trends of change in the levels of FSH, LH, E2 and prog during the year. Frequent peaks in E2 concentration were observed and were generally associated with or followed by LH surges. PRL concentration showed a slight but significant rise during the second half of the year. Rises in prog concentration suggestive of ovulation occurred in 36 percent of the months of observation. However, in all these instances, there were evidences suggestive of deficient luteal phase. The bleeding episodes were usually, but not always, related to decline in E2 and prog concentrations.

Keywords:

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