SOCIETY FOR ENDOCRINOLOGY

One Hundred and Sixty-Sixth Meeting

19th November 1982
Institute of Education, London WC1

Abstracts of Papers

The opinions and views expressed are those of the submitting authors and have not been verified by the Society, which accepts no scientific responsibility for the statements made.
The initiation of each fresh ovarian cycle in normal subjects is preceded by changes in LH
prolactin possibly associated with changes in ovarian steroids and prolactin. The changes in prolactin are associated with the preovulatory surge of LH.

In the present study we have examined the effect of prolactin on the frequency of ovulation in women with amenorrhea or oligomenorrhea who had intact negative and positive feedback mechanisms and a cycle initiation defect. Four women were divided into two groups (A and B) and a mean progesterone level in the follicular phase was measured. In group A, the mean progesterone level in the follicular phase was significantly higher than in group B. In group B, the mean progesterone level in the follicular phase was significantly lower than in group A.

These results indicate that administration of exogenous prolactin can modify the prolactin levels of gonadotropins extraction in women who are not associated with a normal luteal phase. Further studies may result in an identification of the hormonal factors underlying the initiation of the menstrual cycle and particularly the establishment of the follicular phase normally observed in the early follicular phase.
The initiation of the menstrual cycle in normal subjects is preceded by changes in LH pulsatility possibly associated with changes in certain stress levels following ovulation. A defect in this aspect of cycle initiation is considered to be present in anovulatory women who respond to clomiphene treatment by ovulation (Hall, 1972). In the present study we have examined the effect of progesterone treatment on the frequency of LH pulsatility in women with amenorrhoea or oligomenorrhoea who had intact ovulatory and positive metronom-amountophin feedback mechanisms and a cycle induction defect. Prior to treatment the normal LH pulsatile release pattern showed a pulse frequency changing between 3 and 5 pulses within the four-hour period (mean 4.1) and a mean percentage increase in amplitude from 41.1% to peak of 47.1% ± 6.4%. This is similar to the pattern seen in the follicular and early luteal phase of the normal menstrual cycle. (Ishizaki, 1972). Following treatment with progesterone there was a significant reduction in pulse frequency to a mean of 1.9 pulses within the four-hour period and a significant increase in pulse amplitude was observed (p < 0.001). These changes were parallel with the normal luteal phase. There was no significant change in plasma oestrogen (max: max: 15:0.011). These changes were parallel with the normal luteal phase. These results indicate that administration of progesterone may modify the pulsatile pattern of gonadotrophin secretion in anovulatory women to that associated with a normal luteal phase. Further similar studies may result in identification of the hormonal factors underlying the initiation of the menstrual cycle and particularly the establishment of the follicular phase normally observed in the early follicular phase.

Ishizaki, R.S. P. 41 (1972) J Clin Endocrinol 32: 471-475
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