A TWO WAY ACTION OF PROGESTERONE IN FERTILITY MANAGEMENT

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ABSTRACT

Objective: To study the role of progesterone in the treatment of amenorrhoea and as a contraceptive.

Material and Methods: 120 females having secondary amenorrhoea were treated with 100 mg of progesterone each. In the second group of 120 female having normal menstrual cycle were also given a dose of 100 mg of progesterone.

Results: Out of 120 amenorrhoeic patients, progesterone in a dose of 100 mg induced menstruation in 85 (70.8%) cases. The same dose of the hormone on the other hand prevented fertility in the group contraception was required.

Conclusion: Hence, we suggest therapy of progesterone with normal level of estradiol and in the first attempt before histopathological examination of uterus for group A and low dose of the drug for group B of fertile women.

Key words: progesterone, contraception, amenorrhoea.

INTRODUCTION

Progesterone is the first biologically active compound in the steroid biosynthic pathway, formed in the adrenal cortex, the testes in males and the ovaries and foeto-placental unit in females.[1,2] The same hormone has also been called the female's reproductive hormone as it ragulates the accessory organs during the menstrual cycle and prepares the uterus for implantation of blastocyst. Besides, it helps in maintaining pregnancy and prepares breasts for lactation. The measurement of this hormone is important to confirm ovulation, luteal phase defects, to monitor replacement therapy and to evaluate patients at risk from spontaneous abortion[3]. It has also been used as a therapeutic agent in in-vitro fertilization,[5] contraceptives[6] and to produce regular withdrawal

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INTRODUCTION

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Discussion

Progesterone plays a significant role in the development of the female characters. Its level provides a lot of information about the status of women. In our study, the supplementation of this hormone started the menstruation of 70.8% amenorrhoeic patients. 26 women failed to menstruate because of estradiol levels less than 20 pg/ml. A study documented that uterine bleeding usually occurs with this therapy in patients having cestradiol level more than 50 pg/ml.[8] Estradiol priming of the endometrium is necessary before progesterone to have its effects on the endomerium and later cause the withdrawal bleed.

This dose of 100mg Norigest if further followed up with ultrasound scan for a period of two months night be as equally effective in our population as 200 mg of inj Norigest for contraception.

Estrogen deficiency can be excluded by administering estrogen prior to progesterone. However, the absence of withdrawal bleeding in the two women having progesterone levels less then 5 pg/ml after the progesterone injection might be due to malabsorption/secretory function of progesterone. Where as the negative response to hormone treatment in seven women with normal estrogen levels and a normal progesterone response suggests the presence of uterine disease or abnormal endometrial response like in Ashermanns syndromes. Therefore, progesterone can be given as therapeutic trial to rule out uterine pathology in amenorrhoeic patients.

On the other hand the stoppage of menstruation in 90% women of the second group with progesterone therapy, showed good response to the treatment. The action mechanism is that progestin inhibits secretion of gonadotraophin, especially the cyclic release of LH. This in turn inhibits ovulation, formation of corpus luteum and secretion of progesterone; essential for thickness and secretory changes of the endometrium and resulting in cessation of menstruation. Mishell and his co-workers reported that contraceptives containing 200 mg of progesterone increased the level of progesterone first, then its levels decreased after 5th day and the low level maintained after 10 day for 120 days.[9] The findings of the authors suggesting that if any women wants child spacing for further three months, she should use the second injection (200 mg). However, if a women desires to conceive, she should stop the therapy. The probability of conception is lowest in the first month and then it increases steadily.[9] But in our study we used 100 mg in our population quite effectively. Therefore, we suggest 100 mg injection for minimum side effect of the hormone. The present study will also create awareness among medical scientists that the therapy of pro-gesterone should be monitored for proper investigations of women's hormonal status.

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