

TREATMENT OF PUBERTY MENORRHAGIA WITH HORMONES

by

R. K. CHAKRABORTY,* M.D., D.G.O.

and

P. K. DEVI,** M.S., F.R.C.S.

Since the cause of functional uterine haemorrhage is a disturbance in hormone function it is reasonable to assume a good chance of success with hormonal treatment. Hormonal therapy is most effective if used rationally, but careful examination and investigation to exclude other conditions giving rise to irregular bleeding at puberty are considered essential. The principles of treatment are to check a bout of haemorrhage, regularise menstrual cycles, induce ovulation, reduce further blood loss and restore blood deficit.

Progesterone and its derivatives are widely used in the treatment of functional uterine haemorrhage and have advantages over other hormones since the endometrium is converted to the secretory type and secretion of F.S.H. can be inhibited. For many years, progesterone itself and ethisterone were the only available progestational agents. Recently, however, the introduction of a wide range of new steroids (oral progestogens) has revolutionised the treatment of

menstrual disorders. The main advantages of these drugs are their potency, effectiveness orally, lack of serious side-effects, they are more convenient to administer and therapy can be made more accurate and regular.

Material and Methods

This study is based on ten cases who attended the out-patients' department of the Gynaecology unit of the Nehru Hospital, Chandigarh, with a follow-up for 6 months in each case. These cases include those who came for treatment for the first time as well as a few who were being followed up on treatment started earlier. The patients were selected on the following basis:—

- (1) Those complaining of irregular or regular but excessive bleeding, sometimes of a continuous nature of more than 15 days.
- (2) From the age of menarche to 20 years.

Apart from a detailed history, general physical examination, abdominal and rectal examinations, the following special investigations were carried out in all the cases included in the study: (Vaginal and per speculum examination were done in patients who were married):

*Lecturer.

**Professor.

Dept. of Obst. & Gynaec. Post-graduate
Dept. of Obst. & Gynaec. Post-graduate Institute of Medical Education and Research, Chandigarh (India).

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Haemogram,
Coagulogram,
Complete examination of urine,
Chest-X-ray/Screening chest,
Protein-bound iodine,
Endometrial biopsy in selected cases.

Treatment used in the study

Two types of progestational agents in combination with oestrogens were used in this study:

- (i) Lynestrenol, a 19-nor-steroid compound—5 mgms. with mestranol 0.15 mgm. (Sistometril-Ciba)
 - (ii) Megestrol acetate, a 17-acetoxy progesterone derivative—4 mgm. with ethinyl oestradiol 0.05 mgm. (Voldys 21—B.D.H.)
- (a) For initial control of bleeding
 - 11 cases
 - Lynestrenol—M.E. — 8 cases
 - Megestrol acetate—E.E. — 3 cases

One tablet—2-4 times daily until bleeding stopped.
 - (b) For cyclical therapy
 - 11 cases
 - Lynestrenol—M.E. — 10 cases
 - Megestrol acetate—E.E. — 1 case

One tablet daily for 20 days. In case of break-through bleeding, the dose was increased to 1 tablet twice daily till bleeding stopped, followed by one tablet daily for the rest of the cycle.
- Response to drugs was noted in regularity of cycles and amount of blood loss during the after treatment and improvement in general condi-

tion, haemoglobin percentage and weight gain.

Observations

Age:

All the patients were in the age group from 14-20 years. Five cases were between 14-16 years and five cases between 17-20 years. One patient was 20 years old.

Age at Menarche:

The majority of cases attained menarche between 12-15 years (8 cases). One patient had her menarche at 16 years and one at 15 years.

Onset in Relation to Menarche:

The number of cases having irregular bleeding from menarche was seven. Three cases started symptoms after 1-3 years of menarche.

Marital Status:

One patient in this series was married for one year.

Socio-economic Status:

Seven cases in this study came from poor socio-economic group and 3 patients belonged to middle class families.

Duration of Complaints:

Seven cases were having complaints since menarche. The time interval between the onset of symptoms and seeking medical advice ranged from 4 months to 3 years.

Type of Bleeding

- (a) Continuous bleeding since L.M.P. — 4 cases.
- (b) Cyclical menorrhagia — 5 cases.
- (c) Metropathic type of bleeding — 1 case.

Investigations:

Haemoglobin was less than 10 gms.% in 3 cases. Examination of the peripheral blood smear showed hypochromic type of anaemia. These patients were given oral preparations of iron along with the hormonal treatment.

One of the patients had puberty goitre which she noticed for about 4 years. Detailed clinical examination did not reveal any evidence of toxicity. Protein-bound iodine, serum cholesterol and photomicrography did not reveal any abnormality. Coagulogram studies did not reveal any abnormality in any of the patients.

Results**(a) Initial control of bleeding:**

TABLE I

Drug used	No. of cases	Results satisfactory
Lynestrenol—M.E.	8	7
Megestrol acetate—E.E.	3	—

In the three cases treated with Megestrol acetate, no satisfactory control of bleeding was observed. In two of these subsequently a dilatation and curettage was done after which the patients stopped bleeding. Lynestrenol, 5 mgm. daily, was given for cyclical therapy in these cases. The remaining one was changed to Lynestrenol for initial control of bleeding which showed satisfactory results, in the sense that the control of bleeding was achieved within 48 hours.

(b) Cyclical treatment:

Lynestrenol was given as a single

tablet from 5th day of the cycle for 20 days. In cases of break-through bleeding, the dose was doubled till bleeding stopped and then continued at the previous dosage. It was noted that (a) there was one case of break-through bleeding which was slight and easily controlled, (b) there was no instance of irregular medication in this series, (c) withdrawal bleeding was much less than the period before medication was started.

In all cases studied, withdrawal bleeding occurred within 3-5 days after stoppage of the drug except the first two cycles in 2 patients. The other side-effect noted was slight nausea in two patients.

Megestrol acetate was tried for cyclical therapy in only one case. It was noted that in this particular case there was no break-through bleeding but the withdrawal bleeding was profuse and was treated by general measures. From the next cycle, this patient was switched over to Lynestrenol.

(c) Restoration of regular menstrual rhythm

Restoration of ovulatory regular cycles is the ultimate aim of any type of treatment of puberty bleeding. All the patients included in this series were first given 3 cycles of treatment. After this course the patients were observed for one month to watch the character of the next period. Out of 10 cases treated with Lynestrenol, seven showed normal menstruation whereas the remaining three showed marked improvement in the sense that the bleeding was less than that before treatment. Although there were no clots, the bleeding continued for 5-6

days in these cases. These findings were correlated with a relatively long history of the symptoms and these three cases were given the drug for another 3 months. At the end of 6 months, the periods became regular and the bleeding was appreciably less and it lasted for not more than 4 days.

Results of cyclical therapy with Lynestrenol may be detailed as follows:

Number of patients	— 10
Number of menstrual cycles in which the drug was given	— 58 cycles.
Satisfactory results as regards regularity of cycles	— 54 cycles (93.1%).
Satisfactorily controlled blood loss—	— 49 cycles (84.5%).

Discussion

The incidence of functional bleeding at puberty has been quoted by many workers, which is shown in Table II.

TABLE II

Name of author	Total cases	Cases with bleeding (pubertal)	Percentage
Sutherland	—	—	3.0
Devi & Sutaria	357	83	23.0
Khan	122	30	16.3
Dass & Chugh	490	17	14.5
Kanakadurgamba & Rao	150	22	16.0
B. de Souza	—	50	11.0

Thus it is seen that the incidence varies widely from 3.0% to as high as 23%. On the whole, figures given by Indian workers are much higher

than Western ones. This high incidence may be due to such factors as poor diet, poor hygiene, low socioeconomic status, early marriage, etc. In the present series, no effort has been made to work out the incidence of puberty menorrhagia in our hospital. The various figures have been quoted only to pinpoint the magnitude of this particular problem and to work out a satisfactory line of treatment in these cases.

The effectiveness of any form of treatment in the management of cases of puberty menorrhagia may be discussed in three aspects, viz., (1) effectiveness in initial control of bleeding, (2) effectiveness in reducing the cyclical flow, and (3) restoration of ovulatory regular cycles.

The initial control of bleeding may be with curettage, hormones or general measures. Sutherland (1955) found a large percentage of cure rates with curettage alone. Out of 43 patients with follow up, 20 had permanent cure and 23 had temporary improvement. Khan (1964) found the effectiveness of curettage as a therapeutic procedure as low as 20-30 per cent. In the present series, curettage was done in only 2 cases; in both the cases the bleeding was effectively controlled. The main purpose of the present study was to see the effectiveness of the progestogen, Lynestrenol (Sistometril-Ciba), specially in unmarried girls in whom curettage is not considered feasible, as in the majority of cases in the present series.

In this study highly satisfactory results were obtained with the use of Lynestrenol. This particular progestogen was effective both in the

initial control of the bleeding as well as in the restoration of regular menstrual cycles. The number of cases treated with Megestrol acetate was very few and hence no definite conclusion could be drawn regarding its effectiveness in cases of puberty menorrhagia.

Summary

Ten cases of puberty bleeding have been treated with Lynestrenol (Sistometril-Ciba). The results were analysed both regarding initial control of bleeding as well as restoration of menstrual cyclical rhythm. Satisfactory results were obtained in seven cases after three courses and in three cases after six courses of treatment.

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