

Study of Puberty Menorrhagia in Adolescent Girl in a Rural Set-up

Shikha Joshi, Hariharan Chella, Deepti Shrivastava

ABSTRACT

Introduction: Puberty menorrhagia is a real trouble among adolescent girls mostly due to problem in hypothalamic-pituitary-ovarian axis.

Aims and objectives: To understand the various causative factors in puberty menorrhagia and to evaluate the role of hormones estrogens, progesterones or combination of both in controlling the excessive menstrual bleeding.

Materials and methods: It is a study conducted in the Department of Obstetrics and Gynecology at Acharya Vinoba Bhave Rural Hospital, JNMC, Sawangi from January 2009 to December 2010. Study included a total of 50 adolescent girls presenting with complains of menorrhagia.

Results: About 78% patients had menorrhagia due to immaturity of hypothalamic-pituitary-ovarian axis; 14% had polycystic ovarian disease and 8% had hypothyroidism. Out of 50 patients who were treated with hormones, 26 patients (52%) responded by the end of third month follow-up.

Conclusion: Majority of the patients showed good response to combined oral contraceptive pills (78%).

Keywords: Puberty menorrhagia, Menorrhagia, Hypothyroidism, Oral contraceptive pills.

How to cite this article: Joshi S, Chella H, Shrivastava D. Study of Puberty Menorrhagia in Adolescent Girl in a Rural Set-up. J South Asian Feder Obst Gynae 2012;4(2):110-112.

Source of support: Nil

Conflict of interest: None declared

INTRODUCTION

Puberty menorrhagia is a very common gynecological problem in adolescence.^{1,2}

Puberty menorrhagia in adolescent age group is almost always caused by anovulatory cycles due to immaturity of hypothalamic-pituitary-ovarian axis.

Puberty menorrhagia is defined as excessive bleeding more than 80 ml and duration > 8 days between menarche and 19 years.

ETIOLOGY

1. Anovulatory cycles
 - ↓↓
 - Unopposed estrogen
 - ↓↓
 - Endometrial hyperplasia
 - ↓↓
 - Prolonged and heavy periods
 - DUB secondary to systemic diseases or organic pathology

2. Coagulation abnormalities:

ITP
TTP
VWF
Factor II, V, VII, X, XI deficiency
Leukemia

3. Endocrinal factors like:

Polycystic ovarian syndrome (PCOS)
Hypothyroidism
Hyperthyroidism

4. Pelvic tumors

Fibroid uterus
Sarcoma botryoides
Estrogen producing ovarian tumors

Diagnosis: In puberty menorrhagia, diagnosis is made by careful history taking and thorough clinical examination.

Evaluation is specially indicated <22 days or >44 days, lasts longer than 1 week or the bleeding is too heavy that anemia develops.

MATERIALS AND METHODS

This study was undertaken in the Department of Obstetrics and Gynecology at Acharya Vinoba Bhave Rural Hospital, JNMC, Sawangi. Total of 50 adolescent girls attending Outpatient department (OPD) over a period of 2 years.

Inclusion Criteria

All adolescent girls attended the OPD of obstetrics and gynecology for the complaint of menorrhagia.

Exclusion Criteria

All married adolescent girls in OPD for complaints of menorrhagia. Girls above 20 years with menorrhagia. Detailed history of patient obtained regarding the menstrual history, age of menarche, regularity of cycles in the past and present, history of duration of flow, history of passage of clots, number of pads used per day, dysmenorrhea and last menstrual period. They were asked about the history of bleeding diathesis, hypothyroidism, hyperthyroidism, history of tuberculosis or contact history of tuberculosis and symptoms of PCOS.

History of any medical illnesses, like hypertension, diabetes mellitus, tuberculosis, asthma, bleeding disorders and any drug intake was taken. All the investigations were done, like complete blood count, peripheral smear, RBS, PT/PTT/BT/CT/platelet count, thyroid profile—T₃, T₄, Thyroid stimulating hormone (TSH), prolactin level, LH/FSH level ultrasonography.

OBSERVATION AND ANALYSIS

The study was conducted in the Department of Obstetrics and Gynecology, Acharya Vinoba Bhave Rural Hospital, Sawangi, Wardha. This study consists of 50 adolescent patients who presented with menorrhagia over a period of 2 years. Analysis of 50 cases of puberty menorrhagia was done regarding:

- Age distribution
- Causes
- Hemoglobin estimation
- Requirement of blood transfusion
- Management
- Response to hormonal treatment.

ANALYSES AND RESULTS (TABLES 1 TO 5)

Table 1: Age distribution of patients

Age (years)	No. of patients	Percentage
10-13	4	8.0
14-16	22	44.0
17-19	24	48.0
Total	50	100.0

Table 2: Hemoglobin distribution of patients

7 gm%	7-9 gm%	9-12 gm%	Total
3	44	3	50

Table 3: Diagnosis

Diagnosis	No. of patients	Percentage
DUB	39	78.0
PCOD	7	14.0
Hypothyroidism	4	8.0
Total	50	100.0

Table 4: Hormonal management

Hormones used	No. of patients	Percentage
COC	22	44.0
Progesterones	7	14.0
Progesterones followed by COC	21	42.0
Total	50	100.0

Table 5: Associated treatment

Drug given along with hormonal treatment	No. of patients	Percentage
Hematinics	25	50.0
Tranexamic acid	18	36.0
Metformin	3	6.0
Thyroxine	2	4.0
Blood transfusion	2	4.0

RESPONSE OF TREATMENT

Among 50 adolescents, it was observed that only 26 patients (52%) had normal menstrual flow at the end of 3rd month of treatment and remaining required further treatment for 3 to 6 months.

DISCUSSION

In the study, 50 cases of puberty/adolescence menorrhagia were managed. Out of 50 adolescence, four patients (8%) belonged to early adolescence group, 22 patients (44%) belonged to middle adolescence group and 26 patients (52%) were from late adolescence period. This study is similar with that of Gautam Allahabadia et al.³

Out of 30 patients, only 6% of patient had hemoglobin of <7 gm%.

In this study, hemoglobin percentage at the time of first visit showed that 44 out of 50 patients were moderately anemic.

All the 50 patients were subjected to basic investigations along with transabdominal USG and it was found that seven patients (14%) had PCOD.

According to Albert Altcheck et al, in his study 25% patient with persistent DUB manifested as PCOD.² Sanjay Rao et al⁶ in his study had observed 2.8% patient having PCOD.

Three out of 50 patients in this study who were suspected to have hypothyroidism were also subjected to thyroid profile, but four patients (8%) had elevated TSH value and were diagnosed to have hypothyroidism.

According to the study conducted by CD Doifode et al,⁴ the incidence of hypothyroidism in this age group was 11.67%.

Sanjay Roa et al observed 5.7% in his study.^{5,6} Douglas L Wilansky and Bernard in their study showed that the hypothyroidism was seen in 22%.

In this study of 50 adolescence, the etiology of menorrhagia was found to be DUB in 39 patients (78%), PCOD in seven patients (14%) and four patients (8%) had hypothyroidism.

Treatment included control of active bleeding by ethamsylate tranexemic acids along with progesterones. Control of heavy bleeding by progesterones in high doses is called medical curettage. The hormones used in this study are combined oral contraceptive pills for 22 patients (44%) and only progesterone for 14 patients (28%); metformin given to three patients, tranexemic acid for 18 patients, thyroxine and blood transfusion for two patients.

Progestogenes used are as follows:

1. T. Medroxyprogesterone acetate–10 mg daily or
2. T. Norethisterone acetate 5 mg (primolut-n)–one tablet daily for 21 days from D5-D25.

Claessens and Cowell¹, in their study, found that the etiology of menorrhagia 75% DUB, 19% bleeding diathesis and 7% had other pathology. Since this study was limited to small group of 50 cases, we did not see patients with bleeding diathesis. Initially high dose norethisterone 20 to 30 mg in divided doses was used for 24 to 48 hours for initial control of bleeding in menorrhagia patients. Then the dose was gradually tapered to 10 mg, once daily, for remaining length of cycle (21 days). Following the withdrawal bleeding, combined oral contraceptive pills were started from D5 of withdrawal flow and continued for 21 days for two cycles.

CONCLUSION

Majority of the patients (78%) having menorrhagia in this study group had anovulatory cycles due to immaturity of hypothalamic-pituitary-ovarian axis. About 14% patients had PCOD and 8% patients had hypothyroidism.

Reassurance, counseling, correction of anemia and improving the nutritional status will play an important role in the management of puberty menorrhagia. Majority showed good response to combined oral contraceptive pills. The response was good for even progesterone pill.

REFERENCES

1. Anne CF, Cowell CA. Dysfunctional uterine bleeding in the adolescent. *Pediatr Clin North Am* 1981 May;28(2):369-78.
2. Albert A. Dysfunctional uterine bleeding in adolescence. *Clin Obstet Gynecol* 1977 Sept ;20(3):633-50.
3. Gautam A, Radha R, Shah S, Vaidya P. Acute adolescent menorrhagia. *J Obs Gyn India* 1992;686-91.
4. Doifode CD, Fernandes K. Study of thyroid dysfunction in patients with dysfunctional uterine bleeding. *J Obst Gyn of India* 2001 March/April;51(2):93-95.

5. Wilansky DL, Greism B. An Early hypothyroidism in patients with me norrhagia. *Am J Obstet Gynecol* 1989;160:673.
6. Rao S, Pawar V, Badhwar VR, Fonseca MN. Medical interventions in puberty menorrhagia. *Bombay Hospital Journal* 2004 April:1-6.

ABOUT THE AUTHORS

Shikha Joshi (Corresponding Author)

Lecturer, Department of Obstetrics and Gynecology, Jawaharlal Nehru Medical College, DMIMS (DU), Sawangi, Meghe, Wardha, Maharashtra India, Phone: 9503481060, e-mail: drshikhajoshi@gmail.com

Hariharan Chella

Professor, Department of Obstetrics and Gynecology, Jawaharlal Nehru Medical College, DMIMS (DU), Wardha, Maharashtra, India

Deepti Shrivastava

Professor, Department of Obstetrics and Gynecology, Jawaharlal Nehru Medical College, DMIMS (DU), Wardha, Maharashtra, India