IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 18, Issue 9 Ser.4 (September. 2019), PP 34-36
www.iosrjournals.org

Evaluation of Puberty Menorrhagia in a Tertiary Care Centre

Priyanka Shrivastava [1], Kiran Trivedi[2], Shashi Bala Singh [3]
1. Ex Senior Resident, Dept. Of Obs& Gynae, Rims, Ranchi.
2.Associate Professor, Dept. Of Obs& Gynae, Rims, Ranch.
3.Professor, Dept. Of Obs& Gynae, Rims, Ranchi.
Corresponding Author: Kiran Trivedi

Date of Submission: 26-08-2019 Date of Acceptance: 10-09-2019

I. Introduction

Menarche is a hallmark event in the life of most adolescent girls. It marks the transition from childhood to puberty. Although mechanisms triggering puberty and menarche remain uncertain, they are dependent on genetics, nutrition, body weight and maturation of the hypothalamic pituitary- ovarian axis. The complete maturation of the axis may take up to 2 years. During this time, it is common for adolescents to present with complaints of menstrual irregularities[1]. Puberty menorrhagia is a significant health problem in adolescent age group and severe cases may require admission and blood transfusion. In 80% of cases puberty menorrhagia is caused by anovulatory cycles[2]. Menstrual cycles are often irregular during adolescence, particularly the interval from the first cycle to the second cycle. Most females bleed for 2–7 days during their first menses [3,4]. Immaturity of the hypothalamic–pituitary–ovarian axis during the early years after menarche often results in anovulation and cycles may be somewhat long[5]. Ignorance and inhibitions lead these young girls into severe complications.This study was carried with the aim to evaluate the causes, associated complications and management of puberty menorrhagia.

II. Materials And Methods

This is a study of 38 patients presenting with puberty menorrhagia requiring in patient admission to Gynecology ward RIMS, Ranchi from June 2015 to May 2016.Each case was evaluated for the demographic profile, severity of symptoms, degree of anaemia, final diagnosis, requirement of blood and component therapy and response to conservative management. The baseline investigations in all the cases included exclusion of pregnancy by urine testing, complete blood count, peripheral smear for RBC and WBC morphology, coagulation profile, blood grouping and Rh typing and transabdominal USG. In selected cases thyroid function test (T3, T4, TSH) and hormonal assays including LH, FSH, Prolactin was done.

Observation

Demographically 94.7% belonged to low socioeconomic class ,66.5% belonged to rural population.On inquiring whether they had knowledge about the normal physiology of menstruation regarding the amount and duration of of bleeding, 66% were unaware. Also 64% of patients did not discuss their problems with their family members due to inhibitions thus landing in complications.

Table 1 :Showing distribution of cases according to age

AGE IN YEARS	NO. OF CASES	PERCENTAGE
12-14	05	13.2
14-16	20	52.6
16-18	08	21
18-<20	05	13.2

Table 2 :Showing distribution of cases according to duration

DURATION OFSYMPTOMS	NO. OF CASES	PERCENTAGE
<6 MONTHS	25	65.8
6-12 MONTHS	08	21
>12 MONTHS	05	13.2

Pie chart showing severity of anaemia .

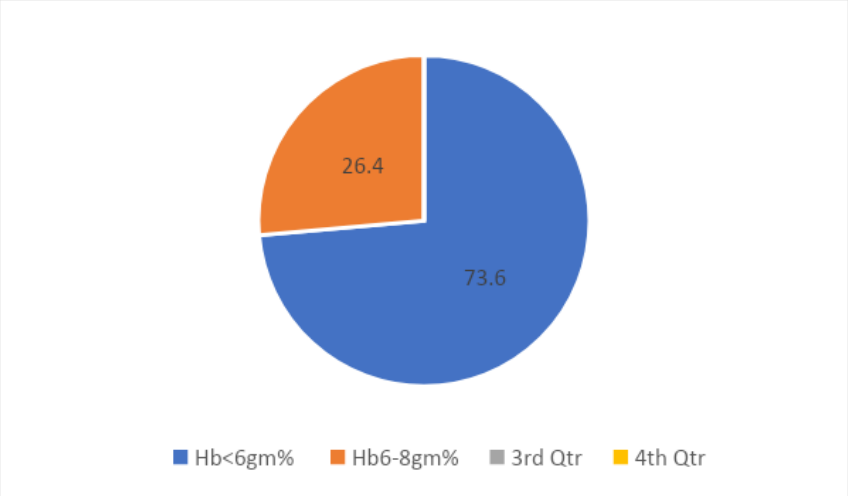

Table 3 : Showing distribution according to causes .

CAUSES	PERCENTAGE
Anovulatory dysfunctional uterine bleeding	82
Idiopathic thrombocytopenic purpura	7.9
hypothyroidism	7.9
Polycystic ovarian syndrome	2.2

TREATMENT	PERCENTAGE
Hormones with blood and other components	84.6
Hormones , antifibrinolytics and blood	15.4

Table 4 : Showing response to treatment

III. Discussion

Menarche is a hallmark event in the life of adolescent girls it marks the transition from childhood to puberty. Most common presentation of abnormal uterine bleeding in adolescents is puberty menorrhagia. It is defined as excessive bleeding occurring between menarche and 19 years of age. Anovulation is responsible for 80% of cases of puberty menorrhagia[6] .A review of literature shows that during puberty, maturation of the hypothalamic pituitary - ovarian axis is characterised by an increase in the frequency and amplitude of pulsatile GnRH, which initiates and regulates secretion of pituitary gonadotropins[4]. During the prepubertal years, LH is secreted primarily at night in an episodic fashion. With the progression to puberty, LH peaks increase in a pattern similar to that seen at night. The timing of these LH pulses is crucial in establishing normal ovulatory cycles. Increases in basal LH as well as immature timing of pulses result in anovulatory cycles. These cycles are characterized by levels of LH and FSH secretion that are sufficient to induce follicular development and oestrogen production but inadequate to induce follicular maturation and ovulation. Thus unopposed oestrogen stimulates endometrial growth. This ultimately outgrows its blood supply and architectural support, resulting in partial breakdown and shedding in an irregular manner.In our study maximum patients belonged to low socioeconomic group and belonged to rural population.The study shows that 66% patients were ignorant about the normal physiology of menstruation and thus did not realise the severity of their problems. Alsodiscussing menstrual problem with family members is considered a taboo which is still prevalant in many parts of country and this inhibition leads to prevention of early diagnosis. Early diagnosis could have prevented complications like severe anaemia with need of blood transfusion.There needs to be a greater focus on adolescent health by creating awareness through health programs, incorporation in school syllabus with an effective execution plan.Eradication of social inhibitions is paramount and this can be instrumental in preventing this simple physiology from becoming a pathology.Maximum number of patients 52.6% were in the age group 14-16 years with duration of symptoms less than 6 months.The study shows that 73.6% of patients presented to us with severe anaemia (Hb<6 gm %) due to severe bleeding as well as due to delay in treatment .Rao reported the requirement of blood transfusion to be 37 %in treating cases of pubertal menorrhagia[7] . In our study the need for blood transfusion was 84.6%.Roychowdhury reported the requirement for blood transfusion to be 35%[8] . The most common cause of puberty menorrhagia was anovulatory dysfunctional uterine bleeding 82% similar to Joshi etal[9] followed by hypothyroidism and idiopathic thrombocytopenic purpua 7.9% and PCOD 2.2%.The occurrence of excessively heavy irregular menses should prompt an evaluation of haematological status to rule out blood dyscrasias. Claessens and Cowell reported 19% of adolescents with menorrhagia requiring

hospitalization had an underlying coagulation disorder in their study[10]. A more recent retrospective study by Falcone et al in 1994 found that 4.9% of admissions over a 10 year period were secondary to a coagulopathy[11]. In our study 7.9% of patients had idiopathic thrombocytopenic purpura. Hence all patients with puberty menorrhagia should be evaluated for coagulopathy for early and prompt treatment.Hypothyroidism is associated with menorrhagia either due to breakthrough bleeding or due to decreased levels of factors VII, VIII, IX and XI.[9] In our study (6.25%) patients were found to be hypothyroid. They responded to thyroid supplementation. Mukherjee et al., in their study of 70 cases of pubertal menorrhagia found the incidence of hypothyroidism to be 7.15%[10].Antifibrinolytic like tranexamic acid form first line of treatment in puberty menorrhagia. Plasminogen activator are a group of enzymes that cause fibrinolysis. An increase in the levels of plasminogen activators has been found in the endometrium of patients with heavy menstrual bleeding compared to those with normal menstrual loss. Plasminogen activators have been therefore been prompted as a treatment in heavy menstrual bleeding[12]

Acute bleeding was managed by norethisterone acetate 30 mg till bleeding stops then it was continued in the dose 15 mg for next 21 days. They were put on medroxy progesterone acetate for next cycles .

IV. Conclusion

There needs to be a greater focus on adolescent health by creating awareness through health programs, incorporation in school syllabus with an effective execution plan. Eradication of social inhibitions is paramount and this can be instrumental in preventing this simple physiology from becoming a pathology.

Reference

[1]. Keth Edmonds D. Gynaecological disorders of childhood and adolescence Dewherst textbook of obstetrics and gynaecology-7th edition Blackwell Publishing 2007; 364-68.
[2]. Devore GR, Owens O, Kase N. Use of intravenous premarin in the treatment of dysfunctional uterine bleeding: A double blind randomized control study. ObstetGynecol 1982; 59 : 285.
[3]. Flug D, Largo RH, Prader A. Menstrual patterns in adolescent Swiss girls: a longitudinal study. Ann Hum Biol 1984;11:495–508. [PubMed] ⇦
[4]. Widholm O, Kantero RL. A statistical analysis of the menstrual patterns of 8,000 Finnish girls and their mothers. Acta ObstetGynecolScandSuppl 1971;14:(suppl 14):1–36. [PubMed] ⇦
[5]. World Health Organization multicenter study on menstrual and ovulatory patterns in adolescent girls. II. Longitudinal study of menstrual patterns in the early postmenarcheal period, duration of bleeding episodes and menstrual cycles. World Health Organization Task Force on Adolescent Reproductive Health. J Adolesc Health Care 1986;7:236–44. [PubMed] ⇦
[6]. Gillani, Salma (January 2012). "Puberty Menorrhagia : Causes and Management" (PDF). Journal of Medical Sciences (Peshwar). **20** (1): 15–18.Advances in Obstetrics and Gynaecology. 3:176 -80.
[7]. Rao S, Pawar V, Badhwar VR. Medical intervention in puberty menorrhagia. Bombay hospital J. 2004; 466.
[8]. Roy chowdhury J, Chaudhuri S, Sarkar A, Kumar B. A Study to evaluate the etiological factors and management of puberty menorrhagia OJHAS.2008;7(1).
[9]. Joshi S, Chella H, Shrivastava D. Study of Puberty Menorrhagia in Adolescent Girl in a Rural Set up.J South Asian Feeder Obst. Gynae2012.4(2): 110-112.
[10]. Claessens EA, Cowell CA. Acute adolescent menorrhagia, Am J ObstetGynecol 1981; 139 : 277.
[11]. Debra A, Minjarez MD, Karen D, Bradshaw MD. Abnormal uterine bleeding in adolescents. Obstetrics and Gynecology Clinics of North America. Vol. 27 no. 1 march 2000 WB Saunders Company, Orlando, FL 32887-4800
[12]. Lethaby A, Farquhar C, Cooke I. Antifibrinolytics for heavy menstrual bleeding. The Cochrane Library, Issue 1, 2003.

Kiran Trivedi. " Evaluation of Puberty Menorrhagia in a Tertiary Care Centre." IOSR Journal of Dental and Medical Sciences (IOSR-JDMS), vol. 18, no. 9, 2019, pp 34-36.