

## A Prospective Study of Adolescent Problems in Patients Attending OPD of Patliputra Medical College Dhanbad

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### Abstract

**Introduction:** Adolescence is the time period between 10 and 19 years of age. during which along with physiological changes, psychological and socio-behavioral changes also occur. It is imperative to have a thorough knowledge of the normal changes occurring in this age-group, as also of the demographic pattern of distribution and prevalence of specific gynecological problems in order to offer quality medical/surgical services to this group of patients.

**Materials and methods:** The present study was a prospective and analytic study conducted in the Patliputra Medical College, Dhanbad, Jharkhand. The study was conducted after ethical clearance from the institutional ethical committee. All adolescent girls (11–19 years) attending gynecological outpatient department (GOPD) from January 2018 to December 2018 were included in the study. The diagnosis of the condition requiring OPD consultation was noted. Menstrual history and general examination were noted. All adolescent girls with puberty menorrhagia who required indoor admission for management of moderate-to-severe anemia in the study period were included in the study. Each patient's hospital record was analyzed with regard to demographic profile, duration and severity of symptoms, menstrual history, history of bleeding disorders, requirement of blood, blood component transfusion, response to therapy, and all investigations (including urine pregnancy test for exclusion of pregnancy, CBC, peripheral smear, blood grouping and typing, USG pelvis, thyroid profile, and coagulation profile). Statistical analysis of data is done by using proportion and percentage in Microsoft excel.

**Results:** There were in total 455 adolescent girls attending Gynecology OPD from January 2018 to December 2018, accounting for 10.28 % of the total gynecological patients attending GOPD of the tertiary care hospital and medical college. Menstrual problems (84.88 %) were the commonest indication for OPD consultation. Menstrual irregularity and dysmenorrhea were the commonest problems among them.

**Conclusion:** Menstrual problems are the commonest reason for gynecological OPD consultation among adolescent girls. Evaluation of bleeding problems in adolescents is justified, before considering them as normal physiological transition. Menorrhagia may be an important clinical manifestation in inherited bleeding disorders and needs to be evaluated especially for ITP, VWD, and factor VIII deficiency. Childhood obesity, sedentary lifestyle, lack of exercises, and popularity of junk food in adolescence are responsible for the increasing PCOS incidence in adolescent girls and is challenge for gynecologists treating them.

**Key Words:** Menstrual problems, Menorrhagia, CBC

Date of Submission: 26-07-2019

Date of Acceptance: 12-08-2019

### I. Introduction

Adolescence is the time period between 10 and 19 years of age. during which along with physiological changes, psychological and socio-behavioral changes also occur. It is imperative to have a thorough knowledge of the normal changes occurring in this age-group, as also of the

demographic pattern of distribution and prevalence of specific gynecological problems in order to offer quality medical/surgical services to this group of patients.<sup>1</sup>

Adolescent girls make up to 10% of total population and 20% of female population according to Adolescent population project, 1996.<sup>2</sup>

Adolescence can be divided into three sub phases

1. Early adolescence (10-14 years): characterized by the onset of puberty and transition out of childhood.
2. Middle adolescence: Identification with group, indicated by wearing of particular clothing, listening to same music, adopting similar verbal phrases.
3. Late adolescence: Transition into adult roles indicated by responsible and mature approach to one's personal and intimate relationships.<sup>3</sup>

Gynecological problems of adolescents occupy a special space in the spectrum of gynecological disorders of all ages. This is because of the physical nature of the problems which are so unique, special and specific for the age group and also because of the associated and psychological factors which are very important in the growth and psychological remodeling of someone in the transition between childhood and womanhood. Yet adolescent gynecology is a subspecialized area of Gynecology, which has still not been explored optimally. In this study, an attempt has been made to review the gynecological problems of the adolescent population attending the Gynaecological Outpatient Department (OPD) of Patliputra Medical College, Dhanbad, Jharkhand.<sup>4</sup>

## II. Materials And Methods

The present study was a prospective and analytic study conducted in the Patliputra Medical College, Dhanbad, Jharkhand. The study was conducted after ethical clearance from the institutional ethical committee. All adolescent girls (11–19 years) attending gynecological outpatient department (GOPD) from January 2018 to December 2018 were included in the study. The diagnosis of the condition requiring OPD consultation was noted. Menstrual history and general examination were noted.

All adolescent girls with puberty menorrhagia who required indoor admission for management of moderate-to-severe anemia in the study period were included in the study. Each patient's hospital record was analyzed with regard to demographic profile, duration and severity of symptoms, menstrual history, history of bleeding disorders, requirement of blood, blood component transfusion, response to therapy, and all investigations (including urine pregnancy test for exclusion of pregnancy, CBC, peripheral smear, blood grouping and typing, USG pelvis, thyroid profile, and coagulation profile). Statistical analysis of data is done by using proportion and percentage in Microsoft excel.

## III. Results

There were in total 455 adolescent girls attending Gynecology OPD from January 2018 to December 2018, accounting for 10.28 % of the total gynecological patients attending GOPD of the tertiary care hospital and medical college.

Menstrual problems (84.88 %) were the commonest indication for OPD consultation. Menstrual irregularity and dysmenorrhea were the commonest problems among them.

Condition	Number	Percentage
DUB	86	18.90
Irregular menses	125	27.47
Leucorrhoea	45	9.89
Dysmenorrhoea	130	28.57
Primary Amenorrhoea	13	2.85
Teenager Pregnancy	4	0.87
UTI	25	5.49
PCOD	27	5.93
Total	455	100

**Table 1:** Different types of gynecological problems in the adolescent population under study

Age at menarche	Number	Percentage
10-12	0	0
13-14	0	0
15-16	6	35.29
>16	11	64.70
Total	17	100
Duration of menarche		
<6 months	6	35.29
6 month to 1 year	4	23.52
1-2 years	5	29.41
>2 years	2	11.76
Duration of menorrhagia		
First episode	7	41.17
6 months	6	35.29
6 months to 1 year	4	23.52

**Table 2:** Age at menarche and duration of bleeding

Causes	Number	Percentage
Anovulatory DUB	14	82.35
Hypothyroidism	1	5.88
Idiopathic thrombocytopenic purpura	1	5.88

Factor VIII deficiency	1	5.88
Von Wille brand disease	0	0
Total	17	100

**Table 3:** Causes of menorrhagia

Hb % level	Number	Percentage
<5 g/dl	7	41.17
5-7 g/dl	9	52.94
7-9 g/dl	1	5.88
Total	17	100

**Table 4:** Hb% of adolescent girls with puberty menorrhagia

There were 17 adolescent girls who required hospitalization for management of severe anemia resulting from puberty menorrhagia, 2.59 % of all adolescent girls attending the OPD and 17.52 % of girls with dysfunctional uterine bleeding. Most of the adolescents were in the age group of 16–19 years (64.70 %). Six girls had attained their menarche within 6 months of presentation. Seven girls with history of first episode of menorrhagia required indoor admission.

All adolescent girls with puberty menorrhagia who needed hospitalization required blood transfusion ranging from 1 to 5 units.

Fourteen girls had anovulatory DUB, two had coagulation disorders, and one had hypothyroidism. Nine adolescent girls had hemoglobin levels between 5 and 7 g%, and seven had Hb% level of <5 g%.

#### IV. Discussion

In our study, 2 (11.76 %) adolescent girls had bleeding disorders. One girl had ITP, and another had factor VIII deficiency. In some other studies, A Shanti Sri et al. and Gillani et al. showed that 8.6 % girls had thrombocytopenia and 2.8 % girls had von Willebrand disease. Koranne in her study showed that ITP (5.7 %) and Glanzmann thrombocytopenia (2.8 %) were responsible for puberty menorrhagia. Prasad et al.<sup>5</sup> studied coagulation profile of adolescent menorrhagia cases. 35 % of cases were found to be suffering from hemostatic diseases. The leading cause of menorrhagia was found to be von Willebrand disease and quantitative platelet disorders. They concluded that in the evaluation of puberty menorrhagia, we should rule out primary hemostatic disorders. The hematology laboratory facilities should be improved by adding the coagulation profile, including ristocetin induced platelet agglutination (RIPA) and VWF Ag assay, to the investigation. Nazli Hossain et al.<sup>6</sup> reported platelet function defect as an important cause for puberty menorrhagia. Singh V et al. reported an extremely rare coagulation defect inherited as an autosomal recessive disorder with variable bleeding manifestation presenting with menorrhagia at the onset of menarche. Prolongation of pro-thrombin duration and that of activated partial thromboplastin duration with moderate deficiency of factor X were found.<sup>7</sup>

Philips et al. reported that 45 % women with bleeding disorders had abnormal platelet aggregation. Khosla AH et al. showed 27 % patients in their study had bleeding disorders. Bevan et al. and Saxena R et al. showed 13–15 % incidence of thrombocytopenia among girls presented with menorrhagia, which was associated with bruising, petechiae, and mucosal bleeding.<sup>8</sup>

In our institute, one patient of ITP was managed with blood transfusion and oral progestogen and tranexamic acid. One patient with factor VIII deficiency with sickle cell trait was an 18-year-old girl, who presented at the onset of menarche as a case of severe menorrhagia. Her hemoglobin had dropped to 1.1 g%. She received 47 blood transfusions and 15 units of fresh frozen plasma since menarche and required further evaluation by hematologist and was referred to higher center.<sup>9</sup>

In our study, one (5.88 %) girl with puberty menorrhagia had hypothyroidism; this is comparable to the studies by Prachi Koranne et al., A Shanti Sri et al., and Manaswini et al. In some Indian studies, genital tuberculosis, polyp, and factor X deficiency were found as uncommon causes of menorrhagia.<sup>10</sup>

#### V. Conclusion

Menstrual problems are the commonest reason for gynecological OPD consultation among adolescent girls. Evaluation of bleeding problems in adolescents is justified, before considering them as normal physiological transition. Menorrhagia may be an important clinical manifestation in inherited bleeding disorders and needs to be evaluated especially for ITP, VWD, and factor VIII deficiency. Childhood obesity, sedentary lifestyle, lack of exercises, and popularity of junk food in adolescence are responsible for the increasing PCOS incidence in adolescent girls and is challenge for gynecologists treating them.

Adolescent girls with menorrhagia need to be evaluated thoroughly earlier rather than later with the onset of symptoms, so that effective management can be started, and anemia with its consequences can be prevented. Health education classes to create awareness regarding adolescent gynecological problems with the help of menstrual calendar should be conducted regularly in school and colleges. Avoidance of junk food,

healthy life style, yoga, etc. must be encouraged in adolescent girls. It must be a part of the school health program.

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Dr.Rajluxmi Tubid. "A Prospective Study of Adolescent Problems in Patients Attending Opd of Patliputra Medical College Dhanbad." *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*, vol. 18, no. 8, 2019, pp 29-32.