

Medical Intervention in Adolescent Menorrhagia

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Objectives: To find out causative factors of adolescent menorrhagia and success of various treatments. **Design:** Descriptive cross sectional study **Place & duration of study:** Lady Willingdon Hospital, Lahore from May 2004 to April 2005. **Subject and methods:** Fifty unmarried patients at 12-19 years with menorrhagia selected by non-probability convenience sampling. Blood loss was determined by duration of bleeding extending beyond seven days, passage of clots and presence of anaemia. **Results:** The most common cause of menorrhagia was DUB (92%) followed by bleeding and endocrinal disorder. Non-steroidal anti-inflammatory drug and antifibrinolytic agent produced 75% subjective improvement in complaints. However, combined oral contraceptive produced 66% improvement. **Conclusion:** NSAIDS and antifibrinolytic drugs were found to be effective in reducing menstrual loss and should be used as first line of treatment.

Key words: Adolescent, menorrhagia, medical intervention.

Menarche is a hallmark event in the life of most adolescent girls. It marks the transition from childhood to puberty. Although mechanism triggering puberty and menarche remains 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 upto 2 years. During this time, it is common for adolescents to present with complaint of menstrual irregularities.

Abnormal bleeding accounts for approximately half of the gynaecological visits in adolescent girls. These complaints encompasses disorders ranging from minimal spotting to profuse bleeding. Puberty menorrhagia is defined as excessive bleeding occurring between menarche and 19 years. In most of the cases it is caused by anovulatory cycles¹. There is immaturity of the Hypothalamus and inadequate positive feed back resulting in sustained high level of oestrogen.

In all cases of puberty menorrhagia it is mandatory to exclude pregnancy. In persistent abnormal bleeding, the coagulation and endocrinal disorders should be excluded. As in 29-30% of adolescent menorrhagia the underlying cause is bleeding disorder². Similarly hypothyroidism can also lead to menorrhagia³. In general the prognosis is better when dysfunctional uterine bleeding starts after a period of regular menstruation than when it starts at menarche⁴.

The aim of study was to find out various causative factors of adolescent menorrhagia and assess the success of various medical interventions.

Patients and methods:

The present study was conducted in Lady Willingdon Hospital, Lahore from May. 2004 to Apr. 2005. A total number of 135 adolescent were interviewed irrespective of the marital status. Eighty five married girls who were pregnant or had some pregnancy complications were excluded from study.

Fifty unmarried girls who presented with menorrhagia at 12-19 years in OPD and admitted in ward

were included in study. Each case was evaluated for the demographic profile, severity of symptoms, degree of anemia, final diagnosis, requirement of Iron therapy or blood transfusion and response to treatment. The amount of blood loss was determined by history of heavy bleeding extending beyond 7 days associated with passage of clots and by the presence of anaemia. Detailed medical history regarding bleeding and thyroid disorders obtained. The baseline investigation in all cases included, exclusion of pregnancy, blood group, complete blood count, coagulation profile, liver function test, transabdominal ultrasound scan. In selective cases, thyroid function test (T₃, T₄, TSH) and hormonal assay including (LH, FSH) were done. The patients were followed for results of treatment with regard to the subjective improvement for 3-6 months. Data was analysed on SPSS.

Results:

The table 1 shows that unmarried girls constituted significant proportion among total patient. 35 patients (70%) had age of menarche more than 12 years and most of the patient 37(74%) presented with menorrhagia at more than 14 years. In 38 patient (76%) bleeding lasted for more than seven days and it was associated with passage of clots. 3 patient (6%) gave history of either epistaxis, gum bleeding and bruises.

Table II shows majority of the patients had haemoglobin less than 11 gm/dl and 44 patients (88%) were treated by Oral Iron therapy. However, 6 patients (12%) required blood transfusion.

Table III show that in 46 patients (92%) no cause was identified and labeled as dysfunctional uterine bleeding (DUB). The bleeding disorder was found in 2 patients (4%). It was idiopathic thrombocytopenic purpura (ITP). However, 2 patients (4%) had thyroid dysfunction.

Table IV shows that NSAIDS and antifibrinolytics were the most effective drugs. Combine oral contraceptive had also promising results.

Table I: Patient's characteristics

Parameters	=n	%age
<i>Marital status</i>		
Married	85	63%
Unmarried	50	37%
<i>Age of Menarche (yr)</i>		
11 – 12	15	30%
> 12	35	70%
<i>Age at presentation</i>		
< 14	13	26%
> 14	37	74%
<i>Days of Bleeding</i>		
< 7	12	24%
> 7	38	76%
<i>Passage of clots</i>		
Present	37	74%
Absent	13	26%
<i>Abnormal site bleeding</i>		
Epistaxis, gum bleeding, bruises	3	6%
Absent	47	94%

Table II: Haemoglobin level and associated symptoms of anaemia. (n = 50)

Hb level	n=	%age	Sign. Symptoms of anaemia
≤ 6	5	10%	Full blown
7 – 8	29	58%	Moderately present
9 – 11	14	28%	Nil
> 11	2	4%	Nil

Table III: Aetiological factor (n=50)

Aetiology	=n	%age
<i>No cause identified</i>		
DUB	46	92%
Bleeding disorder (ITP)	2	4%
Endocrine disorder (Thyroid dysfunction)	2	4%
Genital tract pathology	Nil	Nil

Table IV: Success of various treatments (n=50)

Treatment	=n	No. of patients showing subjective reduction in blood loss	%age
Reassurance + haematinics	6	3	50%
Non-steroidal anti-inflammatory drug (NSAID) + Haematinics	5	3	60%
NSAID + Antifibrinolytic agent	8	6	75%
Hormonal (CoC) pill	27	18	66%
Thyroxin	2	2	100%
Steroid	2	2	100%

Discussion:

It has always been difficult and challenging to deal with adolescent gynaecology. Menorrhagia is one of the gynaecological complaints which bring the adolescent to the gynaecology outpatient department⁵. In this study

most of the patient 35 (70%) acquired menarche at the age more than twelve years. The same results are shown by United States Health Department survey that the mean age of menarche was 12.5, years⁶. In another survey in Bangladesh, majority of the girls attained menarche at 13 years⁷. Most of the patients had their flow more than 7 days and associated with passage of clots (table 1). So, many patients 34(68%) had their haemoglobin less than 8, gm/dl at the time of presentation. Similar results were found by Plectcher Jr, Slap GB⁸.

In this study 46 patients (92%) had no identifiable cause of the problem and were labelled as dysfunctional uterine bleeding. A study conducted in Lady Reading Hospital, Peshawar, showed that DUB was most common cause (90%)^{9,10}. The bleeding disorder (idiopathic thrombocytopenic purpura was diagnosed in 2 patients (4%). This is comparable to results by Duflos and Oral E^{11,12}.

Non steroidal anti-inflammatory drugs (NSAIDs) and haematinics were given to 5 patients and 3 patients (60%) responded to it whereas 8 patients received NSAIDs alongwith antifibrinolytic agent and 75% of patients showed improvement. These results were similar to study by Winkler¹³. So, the most promising results were produced by NSAIDs and antifibrinolytic agents. Combined oral contraceptive pills (CoC) were given to 27 patients and 18 patients (66.6%) showed subjective improvement. Nilson and Coulter in their studies found pill effective resulting in 50% reduction of menstrual loss^{14,15}.

The 2 patients with hypothyroidism and 2 patients with bleeding problem showed 100% improvement when thyroxin and steroids were given to respective patients. Similar results were produced by Oral E and Higham^{12,16}.

Conclusion:

The most common cause of adolescent menorrhagia was dysfunctional uterine bleeding. NSAIDs and antifibrinolytic drugs were found to be effective in reducing menstrual loss and should be used as first line of treatment.

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