
TEENAGERS MENSTRUAL DYSFUNCTION IN RURAL AREAS IN FAYOUM AND ASSIUT GOVERNORATES

Abd Elsamie A. A., M.D.

Department of Obstetrics and Gynecology, Faculty of Medicine - El Fayoum

ABSTRACT

Objectives : To improve the level of services in adolescent Gynecology clinics for early management of gynecological risk factors in teenagers that may lead to subsequent maternal morbidity and or mortality.

Material and Methods : The study included 750 girls (teenagers), selected from the outpatient clinics of the hospital. A complete medical examination was done and selected investigations were performed ranging from complete blood picture up to hormonal assays and ultrasound according to the patients complaint.

Results : The mean age of menarche was 12.7 ± 32 years, and the mean age of marriage was 17.3 ± 4.2 years. The commonest gynecological complaint was dysmenorrhea 61.3%, While the second most common problem was abnormal uterine bleeding [14.8%]; 35.15% of these were due to DUB, 29.79% were due to pelvic infections, and 28.83% were due to pregnancy complications (Abortion, APH).

Conclusion: teenagers with gynecological problems need special care in their management in a sensitive and gentle way. The majority of their problems can be dealt with in a simple way. The ability to differentiate normal from abnormal menstruation is an essential skill for practitioners who care for teenagers.

INTRODUCTION

Menarche, the onset of the first menstrual bleeding episode is a milestone of sexual maturation and is viewed as a significant rite of passage in many cultures. Parents and primary clinicians may not be aware of normal parameters for cycle length, amount and duration of flow. Thus many girls with cycles that fall within the normal range are brought in for medical assessment, while others do not seek help for significant abnormalities.

Although anovulatory cycles are common, there are parameters for early adolescent menstrual patterns based on standard deviation from the mean. Knowing these parameters will help the physician to differentiate normal patterns of bleeding from those that may indicate an underlying abnormality. Adolescents frequently seek medical advice for menstrual complaints such as irregularity, cramping or heavy bleeding. While there is some overlap in etiologies between adolescent and adult patients, certain menstrual complaints in teenagers may

signify different etiologies to those commonly found in adults⁽¹⁾.

Puberty and menarche

During puberty, estrogen levels increase and the development of a positive feed-back mechanism in response to rising estrogen levels triggers the surge of luteinising and follicle stimulating hormones. The onset of menstrual flow follows an increasing frequency of these hormonal pulsations.

The seminal report of pubertal development comes from Marshall and Tanner where the average age of menarche in this study was 13.47 years⁽²⁾. Subsequent studies in the US have shown a slightly younger age of both pubertal development and menarche. Recently, a large study of 17,077 girls in the United States showed ethnic differences, with white girls having average ages of menarche at 10.5 years, and the larches at 10.0 years. For black girls, development occurred slightly earlier, with average ages of menarche at 8.6 years⁽³⁾.

Median first cycle length after menarche was 34 days with 38.3% having a cycle length longer than 40 days (4).

A girls first period is usually of a median duration of 2-7 days. Knowing these parameters, it may be helpful to talk to girls concerning what to expect of their first period. Girls who have been educated about menarche will experience less anxiety when it does occur (5).

Menstrual disorders:

Disturbances of menstruation, either actual or perceived, are the commonest presenting complaints in out-patient gynecological clinics. There are three main complaints: dysmenorrhea, irregular menses and excessive menstrual bleeding.

It is important to remember that the onset of menstruation does not mean that ovulation has occurred. 45% of girls do not have ovulatory menstrual cycles for 2 years after menarche. The first menses are usually anovulatory. This is important in relation to the problems of irregular and excessive bleeding.

When a teen has abnormal bleeding, pregnancy must be ruled out, even if she states that she has not been sexually active (6).

Selection of diagnostic tests:

Selecting a useful diagnostic test should change our ability to predict whether a patient has a disease of interest or not. In addition, it should also be safe, easy to use and acceptable to patients. Utilization of such tests will lead to more accurate diagnosis and aid the selection of suitable treatment options.

Initial investigations include using abdominal ultrasound, and magnetic resonance imaging. Hematology to diagnose coagulation disorders mainly vonWillebrand's disease and idiopathic thrombocytopenia.

In our practice, we treat first and then only proceed to these investigations if the treatment is unsuccessful, unless the history is suggestive of endometriosis (7).

Endocrine investigations include thyroid function tests, and prolactin, FSH and LH assays; lastly, androgen assay is rarely required in the management of menstrual disorders in teenagers (8). The main

objectives of this work include the early management of gynecological risk problems in teenage girls that may lead to subsequent medical complications. This would also help to guard against them, and improve the level of care for adolescence in gynecological clinics in developed countries.

PATIENTS & METHODS

This study included 750 teenage girls selected from the outpatient clinic of Gynecology at Alazhar Assiut University Hospital and Abshaway Elmarkazi Hospital El Fayoum Governorate, from August 2001 to August 2004. A full history was taken including a detailed menstrual history, then complete physical examination was performed. Investigations were done including full blood picture, coagulation profile (prothrombin time, and concentration, bleeding time, coagulation time) and hormonal assays for serum FSH, LH, T3, T4, TSH, prolactin and testosterone when needed.

Ultrasound examination was done for patients with menstrual troubles including amenorrhea or menorrhagia or early pregnancy complications. A pregnancy test using strip tests for urinary detection of β sub unit of HCG for married patients presenting with abnormal uterine bleeding when pregnancy was suspected.

RESULTS

The mean age of menarche was 12.7 ± 3.2 years (Range 9-15) years, and the mean age of marriage was 17.3 ± 4.2 years (Range 13-22). The incidence of dysmenorrhea was 66.1%; 85.8% suffered from spasmodic dysmenorrhea and 14.2% had congestive dysmenorrhea (Table I).

The incidence of abnormal uterine bleeding was 14.8%, (85% with menorrhagia, 18% with polymenorrhea and 16% with metrorrhagia; some patients had more than one type of abnormal uterine bleeding). (Table II).

Examination and investigation for abnormal uterine bleeding revealed that 35.1% were due to dysfunctional uterine bleeding, 29.72% were due to pelvic inflammatory disease, another 28.83% were due to pregnancy complications, 3.60% were due to uterine fibroids and 2.70% were due to coagulation

disorders (Table III). Primary amenorrhea was detected in 3.86% among the study group.

Etiological study of the primary amenorrhea revealed that 37.9% were due to polycystic ovary syndrome, 20.7% due to hypothyroidism, 27.6% due to hyperprolactinemia, and 13.8% due to imperforate

hymen and Mullerian duct agenesis (No uterus). (Table IV).

From the previous results it can be noticed that the incidence of PCOS was 1.47%, while Hypothyroidism was 0.8%, Hyperprolactinaemia was present in 1.7%, and congenital anomalies was detected in 0.6%.

Table I : Incidence of dysmenorrhoea among the teenagers of the study [n 460 = 61.3%].

Type	Number	Percentage
Spasmodic	395	85.8 %
Congestive	65	14.2 %

Table II : Incidence of abnormal uterine bleeding among the teenagers of the study* [n = 111 = 14.8%].

Type	Number	Percentage
Menorrhagia	85	11.3 %
Polymenorrhoea	18	2.4 %
Metrorrhagia	16	1.6 %

* Some patients had more than one type of abnormal uterine bleeding

Table III : Etiology and incidences of abnormal uterine bleeding among the studied teenagers [total No 111] = 14.8%.

Type	Number	Percentage
Dysfunctional uterine bleeding	39	35.15 %
Pelvic inflammatory disease	33	29.72 %
Pregnancy complications	32	28.83 %
Uterine myoma	4	3.60 %
Coagulation defects	3	2.70 %

* Some patients had more than one type of abnormal uterine bleeding

Table IV : The incidence of primary amenorrhea among the teenagers of the study and its etiology [n = 29 = 3.86%].

Type	Number	Percentage
PCOS	11	37.9 %
Thyroid Function Disorders	6	20.7 %
Hyperprolactinaemia	8	27.6 %
Congenital anomalies	4	13.8 %
a) Cryptomenorrhoea	3	
b) Mullerian agenesis	1	

DISCUSSION

The gynecological problems of teenagers can pose difficulties in management, not just from the physical nature of the problem, but from associated emotional and psychological factors. The girls are often shy and embarrassed to discuss the more personal aspect of their lives. Hence, they often do not know where to turn for help. Added to this is lack of knowledge and understanding as to what is happening to their bodies at this time. This may lead to fear⁽⁹⁾.

How the medical profession deals with these girls is important. What teenagers expect from doctors when they attend the clinic is proper understanding, and personal friendliness.

Disturbances of menstruation, either actual or perceived, are the commonest presenting complaint in adolescent gynecology clinics⁽⁹⁾.

In the present study, the incidence of dysmenorrhoea was 61.3% in teenagers while in another study the incidence was around 75%⁽³⁾. A study of North American girls aged 12-17: years reported dysmenorrhoea in 59%⁽¹⁰⁾.

Our study showed that the incidence of abnormal uterine bleeding among teenagers was 14.8% with 85% of these cases presenting with menorrhagia and 35.15% of these were due to dysfunctional uterine bleeding (DUB). Moreover, 29.79% of these cases were due to pelvic inflammatory diseases.

The present report showed that the incidence of primary amenorrhoea among teenagers was 3.86% with 37.9% of these were due to polycystic ovary syndrome, 20.7% with thyroid functional disorders and 27.6% having hyperprolactinaemia. Lastly, 13.8% of these were due to imperforate hymen and Mullerian agenesis.

CONCLUSION

Teenagers with gynecological problems need special care in their management in a sensitive and gentle approach. The majority of their problems can be dealt with in a simple way. The ability to

differentiate normal from abnormal menstruation is an essential skill for practitioners who care for teenagers. Adolescent gynecology remains an important area to which greater care and interest should be given particularly by rural university hospitals in specialized adolescent gynecology clinics, in order to protect and promote the health of our teenagers.

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