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Original Research Article

Study of adolescent gynecological problems and etiological factors in outpatients

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ABSTRACT

Aims and Objectives: To study the prevalence and etiological factors of adolescent gynaecological problems in outpatient department in teaching hospital.

Materials and Methods: All adolescent girls with gynaecological complaints attending gynaec o.p were included in the study with a fixed proforma and analysed regarding prevalence of various gynaecological problems and etiological factors.

Results and Discussion: 312 cases of adolescent girls presented to outpatient department gynaecological complaints.73% with menstrual disorders, 11% with abnormal white discharge, 42% with dysmenorrhoea,14% heavy menstrual flow, 24% with anaemia Adolescent gynaecological problems are unique and specific to the group like primary amennorhoea, puberty menorrhagea, irregular menstrual cycles, PCOD, ovarian masses which need proper management and follow up to improve the quality of life and future reproductive function.

Conclusion: Adolescent girls form a important sector of patients attending gynaec op whose gynaecological problems and etiological factors needs specific attension towards diagnosis, management and follow up.

1. Introduction

WHO defines adolescent as an individual in the age group 10-19 years.[1] The Gynecological problems of adolescents are unique, special, and specific for the age group.[2] Failure to diagnose and treat conditions like congenital

defects, neglected infections acquired in childhood, endocrinopathies, physical and psychological trauma of sexual abuse and tumors can cast their shadow on future reproductive health of the individual.[3] Various adolescent Gynecological problems are menstrual disorders like ab normal uterine bleeding, primary amennorrhoea, PCOD, puberty menorrhagea leading to severe anaemia, sexual abuse, pregnancy related problems, adnexial masses, endocrinopathies[4] etc. adolescent girls with puberty menorrhagea need to be investigated for coagulation disorders. The most common coagulation abnormality diagnosed was idiopathic thrombocytopenic purpura, followed by von Willebrand disease.[4] Endocrine dysfunctions like hypothyroidism, hyperprolactinemia can cause amenorrhea or irregular bleeding. Infections like tuberculous endometritis can present primary amenorrhoea. About 40-50%suffer with Dysmenorrhea of varying severity ranging from minimal discomfo rt to severe pelvic pain with headache, nausea and vomiting, diarrhea or constipation, fainting, premenstrual symptoms such as tender breasts and swollen abdomen, which may continue throughout the period.[5] Dysmenorrhea is a very common problem among adolescent girls, Studies from India reported the preval encerange between 50 to 87.8%[6] & another study in 1648 adolescent girls in selected districts of Karnataka, the incidence of dysmenorrhea was found to be 87%.[7]

Sexual abu se of adolescent girls will have profound and potentially lifelong psychological effect. Unprotected coitus, sex abuse and repeated unsafe abortions have increased the rate of PID and ectopic pregnancies. women survivors of childhood sexual abuse are at risk for early unplanned pregnancy, STDs, prostitution, further sexual

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abuse (re victimization), antisocial behavior, running away from home, lying, stealing, eating disorders and obesity, and multiple somatic symptoms.[8] They are more likely to engage in health risk behaviors such as smoking, substance abuse, and early sexual activity with multiple partners 40.

Adolescents may present with Pelvic masses like Functional ovarian cyst, Obstructing vaginal / uterine anomalies. Ovarian tumor Tubercular mass, Pelvic kidney. In adolescents, most commonly are functional or benign neoplastic ovarian masses, Mature cystic teratoma is the most frequent neoplastic tumor of children and adolescents.[9] The primary diagnostic technique for evaluating pelvic masses in adolescents is ultrasonography (or) if the results of the ultrasonography examination are inconclusive, CT or MRI.[9] Obstructive genital anomalies like imperforate hymen to transverse vaginal septa vaginal agenesis present with primary amenorrhea[6] and pelvic mass. PCOD, obesity, endocrinopathies are increasing in incidence in adolescent age group due change in life style patterns, sedentary life, faulty eating habits.[10]

2. Aims and Objectives

To study the prevalence, etiological factors of various gynecological problems in adolescent girls 10-19 years of age, attending to the outpatient department of Government Maternity Hospital, Tirupati.

2.1. Methodology

It is a hospital based observational study of Adolescent girls (10-19years) presenting with gynecological complaints to outpatient department of government maternity hospital, Tirupati. For a period of one year from August 2016 to July 2017

2.2. Study Methods

All adolescent girls in the age group of 10-19 years attending to the outpatient department of Obstetrics and gynecology suffering from various gynecological problems like menstrual disorder, acne, hirsutism, per vaginal discharge, breast disease, weight and height problems, lump abdomen and urogenital malformations, etc. were included. A detailed history of gynecological problems and other associated problems will be taken. In addition to the general examination, physical examination including height and weight, secondary sexual characters, presence of any congenital anomalies were recorded and a data regarding sociodemographic factors collected in a predesigned questionnaire/proforma. Investigations like complete haemogram, routine urine examination, blood sugar, coagulation profile, hormonal, assays (FSH, LH, Prolactin and TSH) and pelvic ultrasound will be done when required. The data will be incorporated in excel sheet and analyzed using appropriate statistical method.

3. Results

In the present study analysing the age distribution of adolescents 90% (279 Cases) belong to late adolescence and 10% (32 cases). 10-14 years is defined as early adolescent. 15-19 years is defined as late adolescent.

Most of the adolescents (49.5%^) belong to the age group 19 and 18 years, 16.45% belong to 16 years, 16.72% belong to 17 Years, 7.75 belong to 15 years, 5.14% belong to 14 years, 2.25% belong to 12 years and only 0.32% belong to 11 years. Among the study subjects 84%(262) were educated up to primary school level and 16% were illiterates. Most of the adolescent girls came from rural areas 73%(228), 11%(34) belong to Semi-urban and 16%(50) from urban areas. Analyzing the socio economic status of the study subjects of the present study taking modern kuppuswamy's classification 76%(237) belong to lower socioeconomic status, 17%(53) middle and 7% (22) belong to middle and upper socioeconomic status respectively. About 15% (45) of adolescents were married, remaining 85%(267) were unmarried.

Dysmenorrhea was the most prevalent complaint in the early adolescent group.

Menstrual disorders (about 73%) were the most common presentation to the adolescent gynecological outpatient department followed by abnormal vaginal discharge (about 11%)

Among menstrual disorders dysmenorrhea was the most common 42%, irregular menses 23% and heavy menstrual bleeding 14%.

Dysfunctional uterine bleeding was the most common cause of menstrual disorders accounting for 44%, followed by PCOS which is 39%.

Among 36 cases of heavy menstrual bleeding severe anaemia was present in about 14% of cases, while 61% (22) and 25% (9) of mild and moderate anaemia cases were found respectively. In the present study 55 adolescents were diagnosed as having PCOD. Among 55 cases of PCOD 20%(11) presented with irregular cycles, 10.9%(6) with menorrhagea, 1.8(1) with menometrorrhage a, oligomenorrhea,7.2% (4) with hypomenorrhea, 23.6%(13) with secondary amenorrhoea. Among 6 cases presented with primary amenorrhoea5 had Mullerian agenesis, 1 case had imperforate hymen. Among 21 cases of secondary amenorrhoea 21 cases have PCOD, 4 cases have hypothyroidism and 4 cases have psychological stress due to exams which may be the underlying cause for secondary amenorrhoea. In the present study Mullerian agenesis was the most common cause of primary amenorrhea and PCOS was the most common cause of secondary amenorrhea.

Table 1: Gynecological problems of early adolescent group

Condition	Number of cases	Percentage
Dysmenorrhoea	11	34.4%
Irregular menses	9	28%
Menorrhagea	6	18.8%
Urinary infections	1	3.2%
White discharge	5	15.6%
Total	32	100%

Table 2: Gynecological problems in adolescents

Gynecological problem	Number of cases	Percentage
Menstrual disorders	228	73.07%
Pain abdomen	1	0.32%
Abnormal vaginal discharge	35	11.235
Migraine	1	0.32%
Delayed puberty	1	3.205
UTI	3	
Bartholin ABSCES	2	0.65%
Acne & hirsutism	9	2.88%
Breast diseases	5	0.32%
Obesity	15	4.8%
Mass per abdomen	1	0.32%
Urogenitalmalformations	4	1.29%
Neoplasms	0	0
Total	312	100%

Table 3: Types of menstrual disorders in adolescent girls

Menstrual disorder	Number of cases	percentage
Dysmenorrhoea	111	42%
Heavy menstrual bleeding	36	14%
Amenorrhoea	27	10.6%
Metrorrhagea	3	1.13%
Irregular menses	61	23.1%
Oligomenorrhoea	20	7.58%
Hypomenorrhoea	4	1.52%
Total	262	100%

Table 4: Aetiopathological factors of gynecological problems

Etiology of menstrual function	Number of cases	Percentage
AUB	61	44.2%
Hypothyroidism	18	13%
Pcos	55	39%
Fibroids	2	1.5%
ITP	1	0.7%5
Psychological stress	4	9%
Total	138	100

4. Discussion

In Government maternity hospital monthly gynaec out-patient census is about 1500 cases. Adolesc ent girls constitute about 4-5% of the total patients. In this study various adolescent gynecological problems were studied and their associated co morbid conditions were analyzed. Adolescents suffer from various Gynecological problems delayed puberty, menstrual disorder, Acne/Hirsutism, abnormal vaginal discharge, breast disease, obesity, height problem, lump abdomen, teenage pregnancy, sexual assault, labia majora abscess, urogenital malformation, neoplasms.

There were a total of 312 subjects, presenting with various gynecological problems. Among the 312 cases, late adolescents i.e. between 15-19years were 278(89%) compared to early adolescents 10-14 years of about 33 (11%). 84% of girls were educated and 16% were uneducated, when coming to mother's educational status, which also showed no significant association, about 48% were educated and 52% were uneducated, and their understanding about the problem was related to the level of their education. With majority (52%) being uneducated, this needed much more meticulous counseling and education to both the mother and the adolescent. Married adolescents were about 14.4%.

Major gynecological problem being white discharge PV 28.9%, candidiasis was the commonest cause of pathological discharge among married & trichomonas vaginitis among unmarried adolescents. There was no difference in the presenting complaints between unmarried and married adolescents. Dysfunctional uterine bleeding was found to be the most common cause of menstrual dysfunction (39%) in both married and unmarried girls. Most of the adolescents belong to rural (73%), urban and semi urban areas (27%), belonging to lower socio-economic status(86%) which were no way different from their counter subjects. The prevalence of various gynecological problems in this study was menstrual dysfunction (73%), abnormal vaginal discharge (11%), height & weight problems (4.8%), UTI (3.2%), acne and hirsutism (2.8%), breast diseases (1.6%), urogenital malformations (1.3%), Bartholin's abscess (0.6%), delayed puberty which is comparable to other studies.[11,12]

Mass per abdomen and pain abdomen 0.3%. In comparison with other studies Goswami et al[13] 58.06% have menstrual disorders, Archana Kumari et al[14] 74.1% have menstrual disorders, 14.3% have abnormal vaginal discharge, 4.5% have neoplasm. In Dipali et al Study 53.33% have menstrual disorders, 9.1% have abnormal vaginal discharge, 7.55 have breast diseases. In Ramaraju et al[15] study 745 have menstrual disorders, 17% have abnormal vaginal discharge and 4% have neoplasms. In Patar Jagannath et al[16] study 76.5% have menstrual disorders, 13.1% have abnormal vaginal discharge and3.45% have neoplasms. In all Indian studies[1,14–16] menstrual disorders were the predominant symptom, followed by abnormal vaginal discharge, Mullerian anomalies, mastalgia etc. we didn't get any case of ovarian tumors, there were 2 cases of fibroid uterus presented with heavy menstrual bleeding.

The most prevalent complaint among menstrual disorder was dysmenorrhea 42%, followed by irregular menses 23%, heavy menstrual bleeding (heavy menstrual bleeding) 14%, amenorrhea 10%, oligomenorrhea 7.5%, hypomenorrhea 1.5%, metrorrhagia 1.1%. In comparison with other studies

In the present study, dysmenorrhea was the predominant problem, while in other Indian studies irregular menses was the commonest in some[14,15] while in some other studies dysmenorrhea,[16] oligomenorrhea[1] and heavy menstrual bleedingwere[16] the commonest. Etiology of menstrual dysfunction in comparison with other studies. Dysfunctional uterine bleeding was the most common etiopathological factor for menstrual disorders (44.2%), followed by PCOS (39%), hypothyroidism (13%), fibroid (1.5%), ITP (0.75%), marked psychological stress 2.9% mainly attributed to their school examinations.

Comparison with other studies regarding causes of amenorrhoea

A recent study done in Tamil Nadu showed high incidence of post abortal bleeding being mistaken for heavy menstrual bleeding. This shows the importance of ruling out sexual abuse in adolescents, but present study excluded obstetric bleeding though it occurred in adolescents. In various Indian studies, dysfunctional uterine bleeding was the leading cause of heavy menstrual bleeding followed by PCOS, hypothyroidism, hyperprolactinemia.[1,14–16] Bleeding disorders like ITP accounted for 1-2% in all the studies,[9] but it was only 0.75% in the present study.

In our study dysmenorrhea was the commonest complaint of 111 girls (42%) among them 28 girls (25%) had severe dysmenorrhea, hindering their daily routine Nutritional deprivation, increased demand of adolescent's body, and excessive menstrual loss, all aggravate and exacerbate anemia and its effects. Menstrual disturbances are not uncommon and may add further disruption during this difficult phase for adolescents and their families. Heavy menstrual bleeding (heavy menstrual bleeding cases (25%) moderate anaemia (4-8g/dl) and 5 cases (13.9%) have severe anaemia (<4g/dl) requiring multiple blood transfusions. Heavy menstrual bleeding is present in 36 cases (14%) among which 22 cases (61%) have mild anaemia (>8g/dl.).

There were a total of 55 cases presented with irregular menstrual cycles have PCOD. Rotterdam criteria were used for diagnosing the cases. Majority showed menstrual dysfunction with oligomenorrhea 36%, secondary amenorrhea 23.6%, irregular cycles 20%, menorrhagia 11%, hypomenorrhea 7.2%, and menometrorrhagia 1.8% and 15 cases presenting with excess weight gain. Hyper androgenic feature like hirsutism was found in 9cases (2.88%) which was evaluated and quantified according

Table 5: Various menstrual disorders in comparison with other studies

	Present study	Archanakumari et al 14	Goswami et al 13	Dipali et al	Ramaraju et al 15	Patar jagannath et al 16
Dysmenorrhoea	42	13.3	6.9	31	18.9	19.82
Irregular menses	23.1	54.2	-	-	59	45
Heavy menstrual bleeding	14	-	23.6	21.8	-	25.52
Amenorrhoea	10.6	32.5	29	21.9	21.6	5.52
Oligomenorrhoea	7.58	18.75	40.2	18.75	-	15.86
Hypomenorrhoea	1.52	-	-6.2	-	-	-
Metrorrhagea	1.13	-	-	-	-	13.1

Table 6: Causes of amenorrhea in comparison with other studies

Causes of amenorrhoea	Present study	Diwali Prasad et al	Archana kumariet al 14	Goswami et al 13	Ramaraju et al 15
Primary amenorrhoea	6	6	7	8	7
Imperforate hynmen	1	-	2	2	5
Turners syndrome	-	1	1	1	-
Testicular feminization syndrome	-	1	-	2	-
Secondary amenorrhoea	21	8	20	13	9
pcos	13	3	10	10	6
pregnancy	-	-	1	1	-

to the modified Ferriman–Gallwey score system. All 9cases had mild hirsutism and proper counseling, I nvestigations were done. Anti-androgens were started if the girl was too much worried about the hirsutism. Another Indian study[15] of adolescent PCOS showed the following presentation -menorrhagia 33%, oligomenorrhea 33%, secondary amenorrhea 26.7%, acne/hirsutism 6.67%, this was similar to the present study. There were a total of 27 cases of amenorrhea (10.6%) of which 6cases are primary amenorrhea and 21 cases of secondary amenorrhea. Among them one adolescent presented with cryptomenorrhea and five others had Mullerian anomalies; one out of 5 had unilateral kidney (urogenital malformation). Among 21 girls with secondary amenorrhea13 had PCOS, four girls were hypothyroid and the remaining four girls had marked psychological distress, they were referred to clinical psychologist.

Mullerian agenesis was the commonest cause of primary amenorrhea and PCOS was the commonest cause of secondary amenorrhea, this was similar in comparison with other Indian studies.[1,14,15,16]

Ones case of mass per abdomen with Right sided ovarian and paraovarian cyst, presented with pain abdomen managed by conservative surgical procedure – Right ovarian cystectomy and paraovarian cystectomy HPE report – Simple serous cyst. One case of acute pain abdomen with hemorrhagic ovarian cyst treated conservatively with medical management – IV/IM analgesics. Five cases of mastalgia, two cases were cyclical and remaining 3 were non-cyclical mastalgia with no other associated co-morbidities or lump in breast on examination, treated conservatively with analgesics, vitamins and minerals, primrose oil, One case of menstrual migraine she was put on triptans, hormonal pills, educated regarding her condition and reassurance was given.[9]

Menstrual abnormalities are the most common problem of adolescents. Many adolescents with menstrual disturbances never present to their family doctor or gynecologist. Embarrassment about discussing menstruation, fear of disease, and ignorance about services available may lead to delayed presentation or consultation with doctor. Any organic pathology therefore should be evaluated timely so as to improve the quality of life. Setting up of separate adolescent clinics is desirable for efficient management.

5. Summary

312 cases of adolescent girls presented to outpatient department with significant complaints. Menstrual disorders were the commonest 73% followed by abnormal vaginal discharge 11%. Among the menstrual disorders dysmenorrhea being most prevalent 42% followed by heavy menstrual bleeding 14%, among which HMB leading to severe anemia requiring multiple blood transfusions to save her life were 14%. DUB was the most common etiological factor for menstrual disorders followed by PCOS and hypothyroidism. There were 5 cases of Mullerian agenesis, being most common among primary amenorrhea 83% and PCOS among secondary amenorrhea 62%. All these problems needed early detection and correction to safe guard the adolescent girl's future fertility.

6. Conclusion

Though adolescents constitute only about 5% of all patients attending gynaec outpatient department, adolescent gynecological problems are unique and specific regarding presentation, diagnosis and management of their problems is important for their future reproductive health. There is a need for adolescent clinics in busy outpatient departments to provide privacy for adolescents and their mothers to discuss their problems without embarrassment.

7. Source of funding

None.

8. Conflict of interest

None.

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