GYNAECOLOGICAL PROBLEMS IN INDIAN ADOLESCENT GIRLS

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ABSTRACT

BACKGROUND

We undertook the study to assess the clinical profile of adolescent girls in the age group of 10-19 years attending our gynaecology clinic at GMC Kottayam. The objective was to evaluate various clinical presentations and different modalities of management required for the girls in this group.

MATERIALS AND METHODS

We analysed 100 consecutive adolescent girls who visited our clinic at GMC Kottayam for a period of two years. They were evaluated prospectively for various clinical presentations at each visit. Specific proforma was filled for each patient which included their personal details, gynaecological problems with associated complaints, menstrual history, examination findings including height, weight and secondary sexual characteristics. Investigations such as haemogram, hormonal assay and USG were carried out as and when required. Counseling for good nutrition, physical fitness, exercise, responsible sexual behaviour and immunization was undertaken as per the need of the patient.

RESULTS

The commonest complaint was menstrual disorders 54% followed by ovarian tumours 25%. Other complaints included teenage pregnancy, sexual assault, leucorrhoea, vulval injury, Bartholin's abscess etc. The incidence of severe anaemia was 7.4% in our study. Few suffered from hypothyroidism. There was one case of ITP and one case of CAH. 24% of girls had features of PCOD.

CONCLUSION

Over the last few years, Adolescent Gynaecology has emerged as a subspecialty in developing countries. Health professionals dealing with adolescent age group should have empathy, friendliness and non-judgemental attitude towards their parents. Confidentiality of young people should be maintained. We need to give special attention to adolescent population as they will be citizens and parents of tomorrow.

KEYWORDS

Adolescent Gynaecology, Amenorrhea, Oligomenorrhea, Dysmenorrhea and Menorrhagia.

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BACKGROUND

Adolescence, the period between childhood and adulthood, is usually defined by the rapid onset of biological and psychological growth and development before or at the second decade of life ending before the age of 20.

Gynaecological problems of adolescents occupy a special space in the spectrum of gynaecological 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 psychological factors which are very important in the growth and remodeling of someone in transition between childhood and womanhood. Yet adolescent gynaecology is a subspecialised area of gynaecology which has still not been explored optimally. Adolescence is a time of enormous physical and psychological change for young women. Serious gynaecological pathology is rare in this age group, but menstrual problems, ovarian masses and pregnancies are not uncommon and may add further disruption to this difficult phase for adolescents and their families. Embarrassment about discussing menstruation, fear of disease and ignorance about available services are likely to mean that many problems are not discussed or present following maternal pressure. Adolescents do not access health services in the same manner as adults and effective services must recognise these patterns and plan accordingly. In this study an attempt has been made to review the gynaecological problems of the adolescent population attending the gynaecology outpatient department.

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Aims and Objectives

We undertook the study to assess clinical profile of adolescent girls in the age group of 10-19 years attending our gynaecology clinic at Government Medical College

Hospital Kottayam. The objective was to evaluate various clinical presentations and different modalities of management required for the girls in this group.

MATERIALS AND METHODS

Study Design- Prospective study.

Study Setting- Done in the Department of Obstetrics & Gynaecology, Government Medical College Hospital Kottayam, Kerala.

One hundred girls in the age group 10-19 years attending the gynaecology outpatient department for a period of two years were included in the study. A detailed history of gynaecological problems and other associated problems were taken. In addition to the general examination height, weight and secondary sexual characters were recorded. Investigations such as haemogram, coagulation profile, hormonal assays (FSH, LH, PROLACTIN, TSH) and pelvic ultrasound were done as and when indicated.

Inclusion Criteria

Girls in the age group 10 -19 years attending the outpatient department of Government Medical College Hospital Kottayam for a period of two years and were willing for examination and follow up were included in this study.

Exclusion Criteria

Those girls who were not willing for examination were excluded from study.

Statistical Analysis

All the data were entered in MS excel and analysed using SPSS software.

RESULTS

We analysed the clinical profile of 100 consecutive adolescent girls. Table 1 shows the various gynaecological problems encountered in these girls. In my study menstrual disorders are the commonest complaints of adolescent girls attending gynaecology outpatient department (54%) followed by ovarian tumours (25%). Table 2 shows the type of menstrual disorders. The commonest menstrual disorder was menorrhagia (HMB) 29% followed by oligomenorrhea 24% and amenorrhea. Less common complaints were dysmenorrhea and polymenorrhoea. Table 3 shows the aetiology of primary amenorrhea. Mullerian agenesis was the most common cause of primary amenorrhea followed by imperforate hymen. PCOD was the most common cause of secondary amenorrhea. Table 4 shows DUB as the most common cause for menstrual dysfunction followed by PCOD. Two girls had thyroid disorder and one had ITP.

Table 5 shows the most common presenting symptom of ovarian tumours. More than 50% girls presented to the casualty as acute abdomen. 12% of the ovarian tumours were incidental finding on USG. Two of the girls had menstrual complaints, two had abdominal distension and three cases presented as palpable mass per abdomen. Table 6 shows the histopathology of ovarian tumours. Serous cyst adenoma topped the list followed by mucinous cyst adenoma and dermoid cyst. There was one case of endometrioma. It is interesting to note that 2 girls who presented to the casualty with acute abdomen had torsed normal ovaries on laparotomy. Figure 1 shows the type of surgeries performed on adolescent girls. Laparotomy for ovarian tumours were the commonest operation performed.

Types	Total Number of Patients	%
Menstrual Disorders	54	54
Ovarian Tumours	25	25
Teenage Pregnancy	8	8
Sexual Assault	4	4
Leucorrhoea	5	5
Bartholin's Abscess	1	1
Traumatic Vulval Injury	1	1
Congenital Adrenal Hyperplasia	1	1
Total	100	

Table 1. Gynaecological Problems

Types	Number of Patients
Menorrhagia and Metrorrhagia	16
Amenorrhea	16
Hypomenorrhea & Oligomenorrhea	13
Dysmenorrhea	7
Polymenorrhoea	2
Total	38

Table 2. Menstrual Disorders

Primary Amenorrhea	Number of Patients
Mullerian Agenesis	4
Imperforate Hymen	4
Gonadal Dysgenesis (Streak Ovaries)	2
Severe Malnutrition (BMI14)	1
Total	11
Secondary Amenorrhea	**Number of Patients**
PCOD	4
Ovarian Tumor	1
Total	5

Table 3. Etiology of Amenorrhea
Delete Primary Amenorrhea

	Number	%
DUB	22	66
PCOD	8	24
Thyroid Disorder	2	6
ITP	1	3
Total	33	

Table 4. Aetiology of Menstrual Dysfunction

Symptoms	Number	%
Acute Pain Abdomen	14	56
Incidental Detention by USG during Evaluation of Pain Abdomen	3	12
Menstrual Complaints	2	8
Abdomen Distension	2	8
Palpable Mass per Abdomen	3	12

Table 5. Presenting Symptom of Ovarian Tumours

Symptoms	Number	%
Serous Cystadenoma	5	
Mucinous Cystadenoma	2	
Dermoid Cyst	2	
Endometrioma	1	
Functional Cyst	6	
Para Ovarian Cyst	2	
Immature Teratoma	2	
Torsed but Normal Ovaries	4	
Papillary Serous Cystadenofibroma	1	

Table 6. Histopathology of Ovarian Tumours

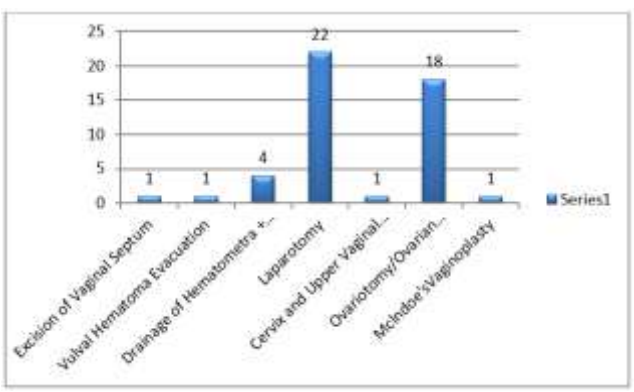

Figure 1. Gives the Type of Surgery Performed

DISCUSSION

The present study shows that menstrual disorders are the commonest gynaecological problems in adolescent girls (54% in my study). These range from amenorrhea to menorrhagia. Amenorrhea both primary and secondary was present in 16 girls (29%). In the study by Goswami Sebanti et al[1] also menstrual abnormality and amenorrhea were the leading adolescent problems. In my study Mullerian agenesis was found in four out of eleven girls with primary amenorrhea. Out of this four, one had transverse vaginal septum, one had cervical and upper vaginal agenesis and the other two had rudimentary uterine horn with vaginal atresia. Patients seek medical advice at puberty when menstruation fails to occur, mal development of uterus and vagina or Mullerian agenesis being the cause. In the study by Anil Sengupta et al[2] Mullerian anomaly and imperforate hymen were the commonest cause of primary amenorrhea. Martha Hickey and Adem Balen[3] also reported that 60% of the cases of primary amenorrhea are due to developmental abnormalities. The first two girls with primary amenorrhea in my study presented with cyclical pain abdomen and USG showed hematometra. The girl with transverse vaginal, septum underwent resection of septum and the other underwent reconstructive surgery. The latter two girls presented later at the age of 18 & 19 with complaints of not attaining menarche. The diagnosis was by USG and both of them had normal ovaries and rudimentary uterine horn. Local examination showed absent vaginal orifice. Both of them along with their parents were counselled and were send for karyotyping and other investigations like X ray. Mclndoe's vaginoplasty was done for one girl. The other girl did not turn up for follow up. All the four girls had normal renal ultrasound. Four of the girls with primary amenorrhea were diagnosed to have imperforate hymen and three of them presented with cyclical pain abdomen and had hematometra and hematocolpos on USG. One girl was referred as a case of complex ovarian mass. Drainage of hematometra was done under GA. Two girls were brought to the OPD by their mothers with complaints of not attaining menarche. One of them had the typical clinical stigmata of Turner syndrome. The other girl had absent secondary sexual characters. Both of them had streak ovaries by USG. Parents and patients were counseled and send for karyotyping. One girl with primary amenorrhea had normal secondary sexual characters and normal pelvic ultrasound but only a BMI of 14. A weight 10% below the normal for height can delay menarche by causing hypothalamic dysfunction (Katz M et al).[4] Out of the seven patients with secondary amenorrhea, six had PCOD by USG and one had ovarian tumor. Goswami Sebanti et al[1] also reported PCOD to be commonest cause of secondary amenorrhea. However, pregnancy should be ruled out with laboratory testing in cases of oligomenorrhea or amenorrhea even if sexual activity is denied, since adolescents may feel unable to confide in a clinician about this. (Adams Hillard 2002).[5] The girl with ovarian tumor underwent laparotomy and HPR was serous cyst adenofibroma. PCOD is a frequent diagnosis now a days. In my study PCOD was the cause of menstrual dysfunction in 24%. PCOS appears to underlie abnormal menses in upto one third of the adolescents (Venturoli et al).[6] In the study by Goswami Sebanti et al PCOD accounted for 21% of the cases. Most of them present with complaints of oligomenorrhea or secondary amenorrhea or merely irregular periods and were obese with acne and hirsutism. The incidence of PCOS is on the rise because of a paradigm shift in life style where teenagers spend most of their time in front of TV and computers without physical exercise and eating of junk food. Few of them were lean with diagnosis of polycystic ovaries by USG.

Menstrual dysfunction was present in 70%. The common complaints were oligomenorrhea and menorrhagia. The commonest cause of menstrual dysfunction was DUB (66%). In the study by Goswami Sebanti et al also DUB was the commonest cause of menstrual dysfunction. DUB is restricted not only to the adult population but is more common in adolescents. In the present study out of the 33 girls suffering from menstrual dysfunction 22 (66%) were found to have DUB. Eight of the girls had PCOD. Two girls with puberty menorrhagia had severe hypothyroidism and started on eltroxin. On follow up it was found that cycles returned to normal in both of them. One girl had ITP.

Incidence of ITP was 13% among girls who presented with menorrhagia (Beven J A et al).[7] Four girls had severe anaemia with Hb less than 6g%. All of them were given blood transfusion. One girl was started on oral progesterones to stop bleeding. Adolescents with severe menorrhagia should be screened for coagulation abnormalities.

Dysmenorrhea was the presenting symptom in seven cases. Only one was a case of congestive dysmenorrhea. USG showed an endometrioma of 11 x 8 cm. Laparotomy was done for her. All the other girls had spasmodic dysmenorrhea. Sarah Creighton et al[8] reported that endometriosis is not an uncommon cause of dysmenorrhea. Patients not responding to usual measures should be evaluated further. Dysmenorrhea may have a significant impact on schooling and examination performance. All the cases of spasmodic dysmenorrhea were managed by simple reassurance and NSAIDS.

Of the 25 cases of ovarian tumours in this study eight had benign epithelial ovarian tumours, two had dermoid cysts and one had endometrioma and two were paraovarian cysts, three had haemorrhagic corpus luteal cysts and three were follicular cysts. There were two cases of malignancy (8%). One was a 15-yr. old girl who presented with a mass of 20 wks. size. Laparotomy was done followed by right salpingo-ovariotomy. HPR came as immature teratoma and she was sent for chemotherapy. The other was a 10-year-old girl. She was admitted with recurrent ovarian tumor. Ovariotomy was done for her at the age of six. HPR came as immature teratoma Grade.[9] She was being followed up with USG and AFP estimation, during which she developed ovarian mass again. Staging laparotomy was done for her. There was a left ovarian tumor. Tumor was removed as the other ovary was normal. HPR came as immature teratoma grade 1 and gliomatosis peritonie. She was sent for chemotherapy. In a study by Claire Templeman et al[10] incidence of malignancy among adolescent ovarian tumours was 7. 9%. Malignancy is not that common in adolescent age group.

The most common ovarian tumor found in this study was epithelial ovarian tumours (32%) and ovarian cysts including follicular, corpus luteal, and paraovarian cysts (32%). Incidence of germ cell tumours was 16%. According to Hillard P A[9] germ cell tumours are common in adolescents, >50%. (Berek and Novaks Gynaecology 14th edition). In the study by Goswami Sebanti et al[1] the incidence of dermoid was 52% and serous cysts 42%. In a study by Anil Sengupta[2] at Calcutta National medical college incidence of serous cysts was 42% and dermoid cysts 28%. Out of the 25 cases of ovarian tumours 14 cases (56%) presented to the casualty as acute abdomen. Laparotomy was done for 22 cases. There was torsion of ovarian cyst in four cases (16%). Four cases had torsed but normal ovaries which was gangrenous hence proceeded with ovariotomy/ adnexectomy.

Claire Templeman et al[10] also found that torsion was more common in ovarian cysts, dermoid cysts and normal ovaries than in other benign/malignant ovarian tumours. There were three cases of corpus luteal cyst haemorrhage. Seven cases presented with pain abdomen. They were found to have ovarian cyst during evaluation. Two cases presented with progressive abdominal distension. One turned out to be immature teratoma and the other had 22 weeks size mucinous cystadenoma. Only these cases and one case of serous cystadenoma presented as palpable masses per abdomen. Two girls with menstrual symptoms on evaluation were found to have benign ovarian tumours. Ovariotomy/ovarian cystectomy were done for ovarian cysts/ovarian tumours. The cases of functional cysts were followed up. None showed increase in size and two cases regressed. Endometriosis is not that common in adolescents as in adulthood (Hillard P A).[9] There was only one case of endometrioma in my study.

Of the total MTP cases attending the gynaec OPD in our institution 3-4% were adolescents. According to ACOG 2000.[11] 20% of therapeutic abortions in United States is done on women less than 19 years of age. In this study 8% were admitted for MTP. Pregnancy in teenagers is a problem threatening the ultimate reproductive and child health. These girls often do not have safe sex and are vulnerable to STDs. To avoid social problems, they go to quacks and undergo criminal abortion in unauthorised locations and land up with serious complications and chronic PID which affect their reproductive health in future.

Four girls were brought to casualty as victims of sexual assault. Adolescent female is the victim of rape in 50% cases of rape. The victims were selected due to relative helplessness. All the girls in my study were assaulted by neighbours.

One girl attended the casualty with a vulval hematoma after having a fall astride a parapet wall. It was drained under LA. She was given antibiotics. Among other cases, one was a case of Bartholin's abscess managed conservatively. Five girls presented with discharge per vaginum. Four of them were normal mucoid discharge, they were counseled and reassured. One girl had white curdy discharge with pruritus vulva. There was no history of sexual contact. She was given treatment and counseled regarding personal hygiene.

There was also one rare case of congenital adrenal hyperplasia. (21-hydroxylase deficiency). She was on hydrocortisone. Her karyotype was 46XX. She was admitted with hoarsening of voice and clitoromegaly at the age of 11. She had secondary sexual characters and had attained menarche at 10 yrs. Clitoro reduction was done for her.

CONCLUSION

- Menstrual problems are the most common complaints of adolescent females attending the OPD.
- DUB is the most common cause of menstrual dysfunction.
- Thyroid disorder/Bleeding disorder can also be the cause of puberty menorrhagia.
- Since menorrhagia & anaemia are common in this age group the importance of iron supplementation should be stressed during health education.

- Coagulation abnormalities should be ruled out in adolescents with severe menorrhagia.
- Outflow tract obstruction/Mullerian anomaly was the commonest cause of primary amenorrhea
- The diagnosis of Mullerian anomalies/Karyotypic abnormalities will be devastating to the patient & her family. So, a sensitive and sympathetic approach, with counseling of options regarding future sexual and reproductive life should be discussed.
- PCOD was the common cause of secondary amenorrhea. The incidence of PCOS is on the rise because of the paradigm shift in life style including dietary habits and lack of outdoor activities. Life style modification including weight loss and exercise should be addressed to these young women.
- Pregnancy should always be ruled out in all adolescents presenting with oligomenorrhea /amenorrhea.
- Most common presenting symptom of ovarian tumor was pain abdomen.
- Epithelial ovarian tumours and ovarian cysts (including corpus luteal cysts, follicular cysts and paraovarian cysts, were the most common tumours in our study.
- Torsion was common for both ovarian cysts as well as normal ovaries.
- In all adolescents presenting with acute abdomen, torsion, haemorrhage/ rupture of ovarian cyst has to be thought of.
- Malignant ovarian tumor was rare in adolescence. Most common malignancy was malignant germ cell tumour.
- With the identification of serum tumor markers and advances in radiological imaging, a more conservative and rational approach to the management of ovarian masses has been developed.
- Pregnancy rates as well as MTP rates were rising alarmingly among adolescents.
- Unmarried pregnancies are mainly associated with social problems than physical or medical problems that lead to severe emotional and mental trauma to both the woman and her family.
- Adolescent health programmes including sex education and increasing social awareness through entertainment media and lastly effective contraceptive education should be carried out.
- A careful and sensitive approach is needed when evaluating adolescents with gynaecological symptoms. It should always be borne in mind that treatment options may have a significant impact on future general health as well as sexual function and infertility.
- Not every condition encountered can be rectified, but with sensitive physiological management, appropriate treatment and the use of newer reproductive technologies in most of these patients with early gynaecological concerns can live normal sexual and reproductive lives.
- As the problems are specific to this age group, setting up of separate adolescent clinics is desirable for efficient management.

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