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Can Primary Amenorrhea be Considered Preventable ?

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OBJECTIVES – To address the core problem of primary amenorrhea and to stress on its leading preventable causes that can be corrected even before the girl steps into adolescent age. **METHODS** – A prospective study of 23 women with primary amenorrhea was done over a period of two years (January, 1999 - December, 2000). **RESULTS** – Genital tuberculosis was a leading cause (26.09%) of primary amenorrhea, which is not only correctible but also preventable. Mullerian agenesis(26.09%) was equally responsible for primary amenorrhea. Other etiologies were chromosomal anomalities (21.73%), imperforate hymen(17.39%), delayed puberty(4.35%) and hyperprolectinemia(4.35%). **CONCLUSION** – Timely diagnosis and treatment of conditions like tuberculosis, inperforate hymen and hyperprolectinemia can prevent primary amenorrhea

Key words - primary amenorreha, prevention of amenorrhea of primary

Introduction

Since ancient times, menarche marks the beginning of womanhood in a female. It is long been a symbol of female identity, fertility potential and feminine psyche.

Primary amenorrhea is defined as failure to establish menses by the age of 14 years in girls without secondary sexual characters, or by the age of 16 years in girls having normal secondary sexual characters [1].

Incidence of primary amenorrhea varies from place to place. In the United States, it is found to be less than 1%[2]. Similarly, there are striking differences in leading etiologies of primary amenorrhea in developed and developing countries, and from place to place even within countries.

Few problems in adolescent gynecology are as challenging and as important as primary amenorrhea, which is the core of adolescent gynecological problems and needs to be given due attention. Primary amenorrhea not only affects a girl's physical growth but because of social stigma and its far-reaching effects on marital prospects, it also hampers her overall social as well as psychological development.

Unfortunately, problems of menstrual cycle are considered non-discussible in our society because of the social stigma associated with it.

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Material and Methods

Gynecological admissions below the age of 18 years and cases of primary amenorrhea irrespective of their age at presentation were studied over a period of two years (January 1999 to December 2000). A total of 48 admissions were recorded below 18 years of age during this period, including six cases of primary amenorrhea. A total of 23 women with primary amenorrhea were studied and subjected to detailed history taking, physical examination and variety of investigations like complete blood count, ESR, sonography, hysterosalphingography, laparoscopy, hysteroscopy, IVP, buccal smear, karyotyping and hormonal profile as per the need of each individual. All the details were promptly recorded and later on analyzed.

Observations

Out of a total of 957 gynecological admissions, 48(5.01%) were below 18 years age, of whom only 6(12.5%) had primary amenorrhea. This is not a whole picture of the ailment as many presented late for medical help despite the fact that the problem belongs truly to the adolescent age. Total incidence of primary amenorrhea in our study was 2.4%. (23/957). Minimum age of presentation was 13 years and maximum 32 years. More than half i.e., 13(56.52%) were in the age group of 18 to 25 years. Only 6(26.09%) came before 18 year of age to seek medical help for their problem. Surprisingly, four or 17.39% were more than 25 years old when we saw them. Out of the patients, surprisingly, 12(52.17%) were married.

Nineteen patients with primary amenorrhea were subjected to laparoscopy, which was performed in all except four with imperforate hymen or vaginal

septum. Out of those 19 women laparoscopy was the main stay of diagnosis in 15(78.94%) and was contributory to the diagnosis in 4(21.05%). (Table-I)

Among the etiologies of primary amenorrhea, genital tuberculosis and mullerian agenesis topped the list with 26.09% each. Other leading etiologies were chromosomal problems in 21.73% and imperforate hymen in 17.39%. (Table-II)

Discussion:

Median age of menarche in the United States is 12.8 years[3], while in Britain it is 12 years and 11 months[4]. Despite the fact that average age of menarche in India is considered to be 13.5 years[5,6], most of these girls with primary amenorrhea were brought late to doctors by their parents possibly due to prevalence of social stigma, identity exposure, difficulty in arranging the marriage and embarrassment associated with it. Even out of those six(26.09%) girls who arrived comparatively early i.e., before the age of 18 years, four(66.67%) were having imperforate hymen where the compulsive force behind the presentation to gynecologist was pain rather than amenorrhea. So the overall tendency was that of negligence and escapism.

A strange fact was that 52.17% women in this study were married even without any attempt being made to evaluate or treat their primary amenorrhea and that this also came to the surface only after thorough history evaluation. Though few of them had marriage at an early age, most of those who married after the age of 18 years had hidden the fact of amenorrhea intentionally from their husbands and their in-laws, fearing insecurity of their family and married life. This kind of escapism from reality is very unfortunate. It not only ruins a woman's marital life but also compromises any chances of preserving her obstetric career by delaying treatment.

Among the investigations, though hysteroscopy, hormone profile and sonography were more helpful in screening and in some specific etiologies like tuberculous endometritis, hypogonadism and developmental genital anomalies in diagnosis, it was laparoscopy which was found to be the best single investigative tool in almost all etiologies of primary amenorrhea.

Etiologies of primary amenorrhea in our study can be broadly divided in two groups i.e.; correctible (52.17%) and non-correctible (47.83%). Among the correctible etiologies, we found that genital tuberculosis – the only preventable etiology – was seen in 26.09% in contrast to <1% in the series of Reindoller et at[7]. In developed countries, main etiological factors were chromosomal (43%) and developmental anomalies (14%) as there is virtually a total control of infective etiologies. Unfortunately in India, despite vigorous attempts by government programs, tuberculosis is still widely prevalent and blame goes to the many hurdles like logistic factors, infrastructural weaknesses and lack of administrative devotion to name a few. Remaining correctible etiologies like imperforate hymen, hyperprolactinemia and delayed puberty have good prognosis as far as menstruation and fertility is concerned. While developmental and chromosomal etiologies have poor menstrual and obstetrical outcome.

As we are finding more and more cases of genital tuberculosis leading to primary amenorrhea, we do emphasize here that there should be early detection and adequate management of childhood tuberculosis and early evaluation of primary amenorrhea even at 13 to 14 years of age with the hope of prevention of complete destruction of endometrium by tuberculosis which could ruin the future obstetric career of a girl even in this era of modern hi-tech developments. We even advocate a school screening programme that should screen all girls above the age of 10 years to rule out primary complex and a school education programme that explains to them all facts regarding menstrual cycle. There should be a compulsory questionnaire to be filled up by female students before being admitted to class 9 or 10, which can screen the girls having menstrual problems who can be advised medical care.

Table-I : Laparoscopy in primary amenorrhea :

Etiology	Number	Mainstay of diagnosis	Contributory to diagnosis
Genital tuberculosis	6	4	2
Mullerian agenesis	6	6	–
Chromosomal	5	4	1
Hyperprolectinemia	1	–	1
Delayed puberty	1	1	–
Total	19	15 (78.95%)	4 (21.05%)

Table-II : Etiologies of primary amenorrhea

Etiologies	No. of women (n = 23	Percent	Reindollar et al[7] (n = 326) Percent
Genital tuberculosis	6	26.09 %	< 01.0 %
Mullerian agenesis	6	26.09 %	14.0 %
Chromosomal	5	21.73 %	43.0 %
Imperforate hymen / vaginal septum	4	17.39 %	03.5 %
Delayed puberty	1	04.35 %	10.0 %
Hyperprolctinemia	1	04.35 %	01.5 %
Other	–	–	28.0 %

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