

Clinical Spectrum of Gynecological Disorder among Hospitalized Adolescent : Study at Chittagong Medical College Hospital

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Abstract

Background: Adolescent is one of the most challenging issues for health professionals. Today adolescent comprises 16% of world population, 50% of which are girl. To formulate disease pattern and to interfere related social factors are time demanding. To address the gynaecological diseases pattern of adolescent girls (10-19 yrs) demanding admission in hospital.

Materials and methods: This was an observational, descriptive study. All Adolescent girl admitted in Department of Obs & Gynae of Chittagong Medical College Hospital (CMCH) during November 2021-October 2022. Adolescent girls with obstetric complications (>28 wks pregnancy) were excluded from this study.

Results: A total of 68 adolescent girls were evaluated in this study. They were classified as early teen (10-14 yrs, n=25, 36.76%) and late teen (15-19 yrs, n=43, 63.24%). Important socio demographic factors, married n=10, 14.71%, working n=5, 7.35%, student n=44, 84.70% and dropped out of school n=9, 13.24%. Of the girls, leading cause of hospitalization was ovarian tumor n=19, 27.94%. 2nd most reason for admission was menstrual disorder n=16, 23.52% and 3rd was malformation and maldevelopment of genital tract, n=12, 17.64%. Early pregnancy complications n=8, 11.76%, genital trauma n=5, 7.35% and others n=5, 7.35%.

Conclusion: Disease pattern shows rising cases of ovarian tumor in adolescent and socio demographic factors like teenage marriage, school drop out needs to be addressed in improving adolescent care.

Key words: Adolescent; Gynaecological disorder; Pregnancy.

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Introduction

Adolescence is probably the most turbulent, stressful, uncertain and challenging phase in life. This complex passage of life involves rapid physical growth, hormonal changes, sexual development, conflicting emotions and evolving relationship with families and peers. As defined by UN this age group of 10-19 yrs comprises 16% of world population today 50% of which are girl.¹ Health challenges faced by adolescent are less addressed. Adolescents present with myriads of gynecological problem. Many gynecological issues encountered in this period are unique and requires physicians skills differing from those with adults. Despite that there is paucity of data regarding diseases requiring hospitalization of this girls. To identify and address the gynecological issues that needed hospitalization of adolescent which will help to formulate a guideline for adolescent gynecology.

Materials and methods

This descriptive, observational study was conducted in the Department of Obstetrics & Gynaecology of Chittagong Medical College Hospital from 1st November 2021 to 31st October 2022. Adolescent girls of age group 10-19 yrs. admitted with gynecological problem in dept were included in this study.

A total of 68 girls admitted in the department with gynecological problem during study period were included. We have excluded adolescent with obstetric complications, abortions and non gynecological cases. Necessary permission was obtained from respective authorities (IEC) CMC.

The data were recorded in predesigned proforma and carefully categorized and then analyzed using Microsoft excel to keep the entire study simple. For better assessment of the patient and problems presented by them, percentages were obtained using simple mathematical formula.

Results

In one year, study period, total admitted girl in the department fulfilling our criteria were 68. Among them maximum 63.24% (n=43) were in late teen (15-19 yrs) group. Majority of the girls were from rural areas. The socio demographic characteristics of study population are shown in Table I.

Table I Socio demographic factors of the patients (n=68)

Age □	Number □	%
10-14 yrs. (Early teen) □	25 □	36.76
15-19 yrs (Late teen) □	43 □	63.24
Marital status □	□	%
Married □	10 □	14.71
Not married □	58 □	85.29
Residence □	□	%
Rural □	41 □	60.29
Urban □	20 □	29.41
Rohingya □	3 □	4.4
Hill tract □	2 □	2.94
Island □	2 □	2.94
Educational status □	□	%
Illiterate □	9 □	13.24
Primary □	18 □	26.47
JSC □	31 □	45.58
SSC □	9 □	13.24
HSC □	1 □	1.47
Occupation □	Number □	%
Student □	44 □	64.7
House wife □	10 □	7.35
Garments worker □	5 □	14.71
School dropout □	9 □	13.24

We have found 14.71% (n=10) of the teens were married. There were 13.24% (n=9) girls illiterate. 3 of the teens were Rohingya and 2 were tribes.

Ovarian tumor was the leading cause for admission in our study 27.94% (n=19). Of them 3 patients were of malignant ovarian tumor 4.41%. Menstrual disorder stood 2nd position for hospitalization of adolescent girls 23.52%(n=16). We received 16.17% (n=11) patients with puberty menorrhagia, 4.41% (n=3) with endometriosis and 2.94% (n=2) girls of cryptomenorrhea due to imperforate hymen.

Table II Distribution of gynecological problems observed among participants (n=68)

Diseases □	n=68 □	%
Menstrual disorders □	16 □	23.52
Ovarian tumor □	19 □	27.94
Malformation & maldevelopment of genital tract □	12 □	17.64
Genital tract trauma □	5 □	7.35
Parovarian cyst □	2 □	2.94
Molar pregnancy □	4 □	5.88
Ectopic pg □	3 □	4.41
Genital tract infection □	6 □	8.82
Fibroid uterus □	1 □	1.47

Table III Menstrual disorder

Types of disorder □	n=16 □	%
Puberty menorrhagia □	11 □	16.17
Imperforate hymen □	2 □	2.94
Endometriosis □	3 □	4.41

Table IV Ovarian tumor

Disease □	number-19 □	%
Benign □	16 □	23.52
Malignant □	3 □	4.41

Malformation and maldevelopment of genital tract was 3rd leading reason for hospitalization of patients 17.64% (n=12) in our study.

6 out of 68 girls 8.82% were diagnosed with genital tract infection. 3 of them were of acute PID, 1 Bartholin cyst, 1 with recurrent labial abscess and 1 with vulval wart.

In present study 7.35% (n=5) girls were hospitalized for Genital tract Trauma. 3 of them were post coital injury and 2 Accidental trauma. There were 5.88% (n=4) cases of Molar Pregnancy and 4.41% (n=3) of ectopic pregnancies.

Discussion

In our study we observed that majority of girls 63% (n=43) were in 15-19 yrs. (Late teen) group. It is consistent with other studies.²⁻⁴ It's 73% in study of Bhalerao- Gandhi et al. and in Abeshi Sylvester et al. 84%.^{3,2} Present study shows 14.71% (n=10) girls were married which is similar to 13.3% in Gaswami et al. and 18% in Abeshi Sylvester et al.^{5,3} This indicates prevalence of child marriage is still high in our country. We have found 13.24% (n=9) of the study population were illiterate. Which is a large number n important social factor to address.

60% (n=41) of our study population were rural resident and urban resident were 21.9% (n=20). As Chittagong Medical College is the major referral public hospital in this vicinity, that may play the role for this picture. Another issue for lesser percentage of urban patients may be availability of private clinic services in the city. Present study demonstrates leading cause for hospitalization of girls was Ovarian Tumor 27.94% (n=19). In study by Okafor love et al. it was 11.4%.⁶ Joshi et al. reported ovarian tumor 4.9% and frequency was 4.5% in study of Kumari et al.^{6,7} Menstrual disorder is the 2nd leading cause for admission in our study 23.52% (n=16). It was higher 60% in Gaswami et al. whereas in Kumari and associate reported 74%.^{5,7-10} Possibility of their higher rate of menstrual disorder may be that they have conducted the study in OPD. Malformation and Maldevelopment of genital tract accounted for hospitalization of 17.64% (n=12) of girls. Most of them presented with primary amenorrhea. Okafor Love et al. reports 18.8% consistent with our study.⁶ Kumari reported 6.25% patient with malformation and maldevelopment of genital tract.⁷ Genital tract infection in present study was 8.82% (n=6). It is consistent with Gaswami and associate 8%⁵. In the present study 5 out of 68 girls hospitalized for genital tract injury 7.35%. Gaswami reports it 2.66% and kumari et al. reports 3'51%.^{5,7}

Limitation

These study has certain limitations which include

- Small sample size
- Short study period. ● Single center study.

Conclusion

Bangladesh has an adolescent population of approximately 36 million which is more than one fifth of total population. Future development of a country depends on today's adolescent population. Diseases pattern in present study shows rising cases of ovarian tumor in adolescent people.

Recommendation

To improve adolescent health care multicentric, large scale study needs to be carried out.

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Contribution of authors

JF-Conception, acquisition of data, drafting & final approval.

FS-Data analysis, critical revision & final approval.

AB-Acquisition of data, drafting & final approval.

MJBAC-Interpretation of data, critical revision & final approval.

MB-Acquisition of data, drafting & final approval.

NB-Design, critical revision & final approval.

Disclosure

All the authors declared no competing interests.

References

1. Working for a brighter, healthier future: How WHO improves health and promotes wellbeing for the world's adolescents. Geneva: World Health Organization. 2021.
2. □Sylvester E A, Boniface U Ago, Cajetan I Emechebe, CharlesO Njoku et al. A 5 Year Review of Adolescent Gynecological Emergencies in a Tertiary Hospital in Nigeria. World Journal of Research and Review (WJRR). 2017 ;5(2):17-21.
3. □Bhalerao- Gandhi A, Vaidya R, Bandi F. Managing Gynecological Problems in Indian Adolescent Girls – A Challenge of 21st Century . Obstet Gynecol Int J. 2015; 3(1):00070. DOI: 10.15406/ogij.2015.03.00070.
4. □Joshi R, Domain VK. A study to assess the Gynecology out patient department in secondary care hospital in North East India. Int J Reprod Contracept Obstet Gynecol. 2021;10:546-549.
5. □Goswami P, Ahirwar G, Mishra P et al. Adolescent Gynecological Problems: A Prospective Study. Journal of Evolution of Medical and Dental Science (jemds). 2015;4(102):16709-16712.
6. □Love O, Johnbosco M et al. Review of Childhood and Adolescent Gynecological Disorders at Federal Teaching Hospital Abakaliki, South east Nigeria. International journal of Clinical Obstetrics and Gynecology. 2019;3(6):15-17.
7. □Kumari A. Adolescent Gynecological Problems: A Clinical Study. Journal of Evolution of Medical and Dental Sciences. 2013;2(9):1111-1115.
8. □Rathore R, Sharma s, Arora D. Spectrum of Childhood and Adolescent Ovarian Tumors in India:25 Years Experience at a Single Institution. Mecidonian Journal of Medical Sciences. 2016;4(4):551-555.
9. □WHO. Iron Deficiency Anemia in Adolescents Factsheet- Bangladesh. section 2. 2011, WHO.
10. Maheshwari MV, Khalid N, Patel PD, Alghareeb R, Hussain A. Maternal and Neonatal Outcome of Adolescent Pregnancy: A Narrative Review. Cureus. 2022;14:e25921.