



MENSTRUAL HYGIENE AMONG ADOLESCENT GIRLS – A STUDY FROM URBAN SLUM AREA, GAYA BIHAR

Gynaecology

Dr. Birendra Kumar Rajak

Assistant Professor, ANMMCH, Gaya

Dr. Amar Kumar* Tutor, ANMMCH, Gaya*Corresponding Author

Dr. Sunil Kumar Assistant Professor, ANMMCH, Gaya

ABSTRACT

Background: Reproductive tract an infection which has become a silent epidemic that devastates women's life is closely interrelated with poor menstrual hygiene. The aim and objective of the study was to know the pattern of various menstrual hygiene practices and its association with STI/RTI among adolescent Girl. **Materials and Methods:** A cross sectional study was carried out in STI/RTI Clinic of Urban Health Centre, Gaya involving total 237 married females who attended OPD from July 2019 to July 2020. Girls were interviewed on the basis of pretested and preformed questionnaire. Confirmation of STI/RTIs was based on the symptoms as well as disease specific laboratory investigations. **Results:** About 357 (77.4%) females presented with STI/RTI who were practicing sex during menstruation. Problem of STI/RTI was found less in 134 (60.9%) those practicing shaving of pubic hair. Other personal hygiene practices during menses like washing genitals with soap and water, taking bath during menses were found to be helpful in reducing these infections. STI/RTIs were low in 37 (55.7%) females who were using disposable pads as compared to 97 (71.4%) females who were using reuse cloth during menses. Cleaning practices of reuse cloth were significantly associated with STI/RTI. **Conclusions:** The menstrual hygiene practices and its frequency associated with STI/RTI.

KEYWORDS

Menstrual hygiene, Reuse cloth STI/RTI,

INTRODUCTION

Reproductive tract infection/ sexually transmitted infection (RTI/STI) which has become a silent epidemic that devastates women's life is closely interrelated with poor menstrual hygiene.[1] The RTI incidence was 70 percent more common among women with unhygienic sanitary practices.[2] Untreated RTIs are responsible for 10-15% of foetal wastage and 30-50% of prenatal infection. Increasingly, RTIs are also linked with the incidence of cervical cancer, HIV/AIDS, infertility, ectopic pregnancy and a myriad of other symptoms.[3] Menstruation is a phenomenon unique to the females[4]. Menstruation is still regarded as something unclean or dirty in Indian society of the 355 million menstruating women in India, only 12 per cent use sanitary napkins. Over 88% of women are using shocking alternatives like un-sanitized cloth, ashes and husk sand.[2] Repeated use of unclean clothes and improper drying of used cloth before its reuse results in harbouring of microorganisms results the spread of vaginal infections. Intensity of the problems surrounding menstrual hygiene is evident from the fact that 41% of women are unprepared, psychologically, for menstruation. [5] Formal education about reproductive health is very limited in South Asia. Lack of preparedness and exposure to menstrual hygiene practices lead to unhygienic practices, which have negative impact on women's health. Most of the studies among women have focused on association of safe deliveries and contraceptive practices with reproductive tract infections. Only in recent years has menstrual hygiene got the attention of researchers. Women having better knowledge regarding menstrual hygiene and safe practices are less vulnerable to RTI and its consequences.[6] However, majority of the studies available are limited to adolescent girls. Due to limited studies on married women and diversity of cultural practices in India, mandates to investigate more and more on menstrual hygiene among the married women. So the present study was planned to find out the correlation of menstrual hygiene practices with STI/RTI.

The aim and objective of the study was to know the pattern of various menstrual hygiene practices and its association with STI/RTI among married females.

Material and Methods

A Cross-sectional hospital based study was conducted at STI/RTI clinic of Urban Health Centre (UHC) Gaya Bihar which is affiliated to Department of Community Medicine, Augrah Narayan Medical College, Gaya. Study duration was from July 2019 to 31st July 2020. Approval of the Institutional Ethics Committee was sought before the start of study. Total number of 421 females attended STI/RTI Clinics. Inclusion criteria were allowed us to include Adolescent Girl belonging to age group of 15-20 years and willing participants. Out of 421 Girl 67

were excluded from the study as they did not fulfil the inclusion criteria and 52 were not willing for laboratory tests or internal examination done to confirm the diagnosis. So, total 237 patients were enrolled in the study. Informed and written consent of study population was taken. The nature & purpose of the study was explained to the participant. The data was collected using a pre-designed, pre-tested, semi structured questionnaire and interview method about her name, age, symptoms of patients, duration of the illness. Information was collected regarding menstrual hygiene management which includes the frequency of taking bath during menses, frequency of changing undergarments, shaving of pubic hair and absorbent material used during menses. This questionnaire also includes details of washing and drying practices of reuse cloth. Detailed clinical examination was done in lithotomy position.

Specimen collection

Antiseptic preparation of the perineum and vulva was done. Samples were collected using sterile bivalve Cusco's speculum. Endocervical swab for gonococcal infection was obtained by inserting a sterile cotton swab into cervical canal and rotated for 30 seconds and withdrawn, smear was prepared. Two sterile cotton tipped swabs were inserted simultaneously in the posterior fornix of vagina and rubbed against the vaginal wall to obtain the vaginal swabs followed by collection of blood sample.

Laboratory diagnosis

The swabs were immediately transferred to the laboratory without delay for processing. Cervical swab was sent for Gram staining. Out of the two vaginal swabs one was sent for wet saline mount preparation to confirm Trichomoniasis or Bacterial vaginosis and other for KOH wet preparation to diagnose Candidiasis. Blood sample was collected for RPR and HIV testing for diagnosis of syphilis and HIV respectively.

Statistical analysis of collected data was done by using SPSS with frequency distribution and Chi Square test.

RESULTS

Total 237 participants were enrolled as a study population which comprised of 137 (63.36%) females with STI/RTI and STI/RTI was absent in 97 (37.54%) participants. Shows that 37 (81.4%) females, presented with STI/RTI, who were practicing penetrative sex during menstruation. 7 (21.3%) females were free of the disease by avoiding this practice.

Table 1 shows that 76.07% females were shaving their pubic hair, 57.28% were changing their undergarments daily and 47.13% were taking bath on alternate day during menses. It was observed that

maximum number of study population was washing genitals during menses with soap and water is 116 (57.87%). Most of them 47.81% were using reuse cloth. The result indicates that maximum number of females with STI/RTI 48 (77.2%) were not shaving their pubic hair, 97 (77.7%) were changing undergarments on alternate day, 97 (76.3%) were using reuse cloth during menses and 121 (68.7%) were not washing their genitals with soap and water during menses. STI/RTI was found in 134 (62.8%) females those who were shaving of pubic hair as compared to those females who were not practising it. 98 (77.6%) females were suffering from STI/RTI who were changing their undergarments on alternate day during menses as compared to 89 (59.4%) females who were practicing it daily. 121 (66.76%) females who had suffered from STI/RTI were taking bath during menses after more than one day as compared to 59 (34.31%) females, who were taking bath on every day. Nearly half i.e.122 (47.81%) females were using reuse cloth during menses. STI/RTIs were low in 23 (57.5%) females who were using disposable pads as compared to 98 (81.4%) females who were using reuse cloth during menses. Prevalence of these infections was more among those 121(72.6%) who were not practicing cleaning of genitals with soap and water. All the menstrual hygiene management practices show statistically significant association with STI/RTI. Table 2 shows that 42(26.06%) females were washing the reuse cloth with water only. Problem of STI/RTI was found only in 21 (57.9%) females, who were washing the reuse cloth with soap and Dettol as compared to 77 (91.7%) and 20 (72.5%) females who were washing cloth with only soap and only water respectively. 97(78.86%) females were drying the reuse cloth in closed space inside the house. Total 84 (79.8%) females suffered from STI/RTI who was drying the reuse cloth in a closed space as compared to 28 (64.4%) females who were drying the reuse cloth in sunlight. There is statistically significant association between all unclean practices of washing as well as drying of reuse cloth in sunlight or closed space with Reproductive Tract Infections.

Table 1. Table: 2. Distribution of study subjects according to social determinants and menstrual hygiene practices.

Menstrual Hygiene	Literacy		
	Illiterate (n=671)	Literate(n=294)	
Used Cloth	92 (13.71)	13 (4.42)	17.25, p<0.001
Fresh Cloth	492 (73.32)	105 (35.71)	120.97, p<0.001
Sanitary pads	20 (2.98)	110 (37.41)	205, p<0.001
Home-made pads	67 (9.99)	66 (22.45)	25.69, p<0.001
Menstrual hygiene practices	Religion		
	Hindu (n=839)	Muslim (n=104)	
Used cloth	70(8.34%)	15(14.42%)	4.17, p<0.005
Fresh cloth	530(63.18%)	62(59.62%)	0.65, p>0.05
Sanitary pads	112(14.54%)	18(17.31%)	0.27, p>0.05
Home-made pads	127(15.14%)	9(8.65%)	3.15, p>0.05
Menstrual hygiene practice of using	Socio-economic status		
	Upper class (n=179)	Lower class (n=786)	
Used cloth	5(2.80%)	84(10.69%)	10.95, p<0.001
Fresh cloth	71(39.66%)	546(69.46%)	66.77, p<0.001
Sanitary pad	57(31.84%)	68(8.65%)	69.55, p<0.001
Home-made pad	46(25.70%)	88(11.19%)	25.64, p<0.001

DISCUSSION

Hygiene-related practices of women during menstruation are considered important because it can increase vulnerability to Reproductive Tract Infections. Sexual Intercourse during menstruation is a suggested risk factor for PID. 37 (78.4%) respondents presented with STI/RTI out of those practising penetrative sex during menstruation and association is statistically significant. Eschenbach et al have done a case control study comparing 153 women with PID to 704 controls from STI clinic. 7 They reported that vaginal intercourse during menses increased the risk for gonococcal and anaerobic and aerobic endogenous infection. Problem of STI/RTI was found less 134 (64.8%) in those practising shaving of

pubic hair. A study conducted in Department of Epidemiology, Institute of Basic Medical Sciences, Beijing shows the similar findings. 8 Magnitude of problem was low in females 57.5% who were using disposable pads as compared to 77.4% females who were using reuse cloth during menses. A study done in Andhra Pradesh shows that prevalence of STI/RTI was found to be highest in those women who were using ordinary cloth (37.8%) and least in those using sterilized pads (17.1%). The differences in proportion were also found to be statistically significant (p value <0.05). [9] Leaving tampons in too long can lead to infection, possibly because tampons provide a warm, moist environment where bacteria can thrive and because they can irritate the vagina. A study done in women of the reproductive age group in Shimla city showed that, the prevalence of STI/RTI was significantly high (p<0.001) in those who were using any type of cloth weather clean or unclean. 10 In a study done by Zeng-yu WEN et al, prevalence of endogenous infection was strongly associated with different personal hygiene practices like, frequency of rinsing vulva, shaving of pubic hair and taking bath. [11] Endogenous infections are usually caused by an overgrowth of normal vaginal flora which is usually a result of unhygienic practices during menses, improvement of which, will help to reduce these infections. Problem of STI/RTI was found only in 21 (67.8%) females, who were washing the reuse cloth with soap and Dettol as compared to 77 (91.6%) and 27 (67.4%) females who were washing cloth with soap and water respectively. A study done by Younis N et al showed that poor menstrual hygiene has been founded to be linked with increased risk of STI/RTI such as candidiasis and bacterial vaginosis. [12]

An attempt was made to study menstrual hygiene management practices among married women from urban slum and the results showed that their personal hygienic practices were important in order to get prevented from STI/RTI. Hygiene during menstruation was significantly associated with prevalence of reproductive tract infections. Among those who were using reuse cloth as a absorbent material during menses, unhygienic cleaning practices of reuse cloth are responsible for increasing magnitude of problem of these infections. Personal hygiene among the married women can be improved by empowerment of the existing IEC activities.

Conclusions

The above study indicates that there is need of community based strategy to create awareness regarding improvement of personal hygiene and using sanitary napkins during menses by using IEC activities. Health education should be imparted with emphasis on avoidance of sex during menstruation. Our study highlights the need to provide women in the reproductive age with accurate and adequate information about menstruation and its appropriate management.

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