

An analysis of different risk factors in the development of CIN and early carcinoma cervix

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Abstract

Introduction: The cervical cancer is the second most common cancer in the world. This is the commonest genital malignancy (80%) in India. The different factors like age, parity, duration of marriage influence the development of CIN and Early Cancer cervix. The complains like white discharge, post menstrual bleeding should be evaluated to detect CIN and Ca cervix. **Material and Method:** A cross sectional study of total 50 cases attending Gynaecology OPD are included in this study. The factors like age, parity, duration of marriage, educational status, socio- economic status influence the development of CIN and early Ca cervix. Moreover complains and per speculum findings are evaluated for detection of CIN and early Ca cervix. **Result:** Most cases of CIN group in the age group of 31-40 yrs, in the Ca cervix group it is similar in the age group of 31-40 yrs and 41-50yrs. The cases of CIN and Ca Cervix parity are more than 2 or more. The duration of marriage is more than 16 yrs in both CIN and Ca cervix groups. The cases of CIN and Ca cervix are more in illiterate and low socio economic status. The commonest chief complaint was the white discharge. On speculum examination, cervical erosion was the commonest finding. **Conclusion:** The factors like age, parity, duration of marriage, educational status, socio-economic status influence the development of CIN and early Ca Cervix. The commonest complain was white discharge. On per speculum examination, the cervical erosion was the commonest lesion.

Key Word: CIN, Early Cancer Cervix, Risk Factors, White Discharge.

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INTRODUCTION

Globally, cervical cancer is the second most common cancer among women. Around 5,50,700 new cases and 2,86,823 deaths due to cervical cancer in the world are estimated in 2010. More than 85% cases and 88% deaths occurs in developing world. In India, cervical cancer is the commonest (80%) of genital malignancies with one fourth burden of the world.¹ According to Indian Council of Medical Research, in the hospital based cancer registries(HBCRs), the Dibrugrah town in Assam is the third leading site of India.² The report of

North eastern population based Cancer Registries(PBCRs) indicates an age standardised Incidence rate(AIR) are of 25.4 per lacs in Aizwal district of Mizoram followed by Imphal west district of Manipur of 20.5 per lacs and Kamrup Metro district of Assam of 17.3 per lacs.³ There are different factors which influence the development of CIN and Cervical cancer. The factors like age, parity, duration of marriage, educational status, socio-economic status influence such development. Some complains of patient like white discharge, post menstrual bleeding are also associated with CIN and Cancer cervix. On per speculum examination, cervical lesion, cervical lesion which bleeds on touch are found with CIN and Cervical cancer.

AIMS AND OBJECTIVES

To evaluate different factors like age, parity, duration of marriage, educational status, socio economic condition in the development of CIN and Early Ca Cervix
To assess the importance of complains, speculum findings in these conditions

To find out the scientific basis of importance of such factors

METHOD AND MATERIAL

A cross sectional study was conducted in Obstetrics and Gynaecology Deptt. Of Gauhati Medical College and Hospital from July 2013 to June 2014 in the patient attending Gynae OPD in the age group of 20- 60 yrs. The cases are selected randomly. The ethical committee permission are obtained.

Inclusion Criteria

1. Patient with symptoms like persistent vaginal discharge, Post coital bleeding, post menopausal bleeding, Inter menstrual bleeding, persistent leucorrhoea not responding to treatment
2. Normal looking Cervix with symptoms or unhealthy cervix on per speculum examination
3. Women with lesions like polyp, erosion, hypertrophied cervix, Cervix with nabothian cyst
4. Women with clinical evidence of acute pelvic infection

Exclusion Criteria

1. Woman with bleeding at the time of examination
2. Women who is previously treated with ca cervix
3. Pregnant Women
4. Women with frank lesion
5. Women with previous cervical surgery
6. Women with asymptomatic normal looking cervix

In the patient included in the study, a detailed history is taken particularly emphasising in the said risk factors. Her complains are carefully evaluated. The clinical examination is done particularly focusing on speculum examination. The patient were subjected to pap smear, colposcopy and if necessary colposcopy directed biopsy.

RESULT AND OBSERVATION

A total 50 cases are subjected to this study. As only cases who need colposcopy directed biopsy are included in this study, therefore the number of cases are less. The findings are analysed as detailed. The leading positive finding as per our aims and objectives in this study was CIN in 18 cases and Ca Cervix in 8 cases. The different risk factors are analysed in relation assessed.

Table 1: Distribution of cases according to Age

Age	Number of all cases	%	Number of CIN Cases	Percentage of CIN Cases	Number of ca cervix cases	Percentage of ca cervix cases
20-30	6	12%	2	4%		
31-40	19	38%	7	14%	3	6%
41-50	16	32%	5	10%	3	6%
51-60	9	18%	4	8%	1	2%

Among all cases the highest between 31-40 yrs(19 cases) followed by 41-50 yrs(16 cases). The CIN is highest in 31-40 yrs group(7 cases) followed by 41-50 yrs group (5 cases). In the group of Ca cervix 6 cases both in 31-40 and 41-50 yrs age groups. Therefore it is observed that both CIN and Ca cervix cases are high between 31- 50 yrs.

Table 2: Distribution of cases based on Parity

Parity	Number of All Cases	Percentage of cases	Number of CIN Cases	Percentage of CIN cases	Number of Ca Cervix Cases	Percentage of Ca Cervix caes
1	2	4%	1	2%		
2	8	16%	9	18%	1	
3	20	40%	6	12%	4	8%
4 and 4+	10	20%	2	4%	2	4%

Most of the cases are Parity 2 or above. Similarly CIN and Ca cervix are parity 2 or above. Hence it can be understood that CIN and Ca cervix cases are more in higher parity.

Table 3: Distribution of cases according to duration of marriage

Duration of Marriage	NO. of all cases	Percentage Of cases	No. of CIN cases	Percentage of CIN cases	No, of Ca cervix cases	Percentage of Ca cervix cases
<5 yrs	1	2%	1	2%		
5-10 yrs	10	20%	5	10%		
11-15 yrs	10	20%	2	4%	1	2%
16-20 yrs	12	24%	3	6%	4	8%
>20 yrs	17	34%	7	14%	2	4%

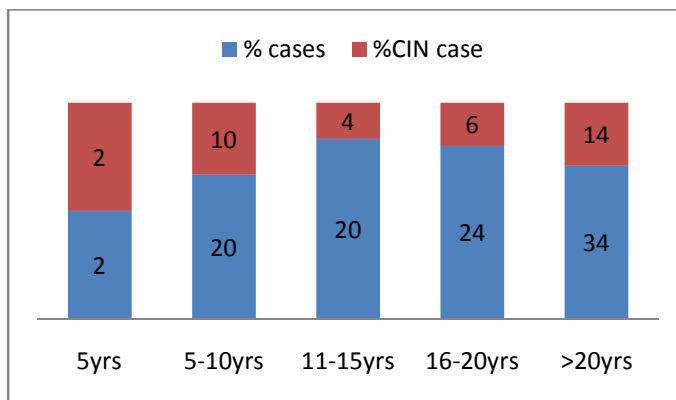


Figure 1: Duration of Marriage

The highest number of cases are above 20 yrs of marriage(34%) followed by 16- 20 yrs period (24%). The no. of CIN cases are also high above 20 yrs marriage period(14%). Similarly ca cervix cases are also high above 16 yrs of married life. These finding strongly proves the association of long married life to the development of CIN and Ca Cervix, which essentially shows early marriage have an adverse impact in the development of CIN and Ca cervix

Table 4: Distribution of cases according to educational status

Education	No. of total cases	%	No. of CIN cases	%	No. of Ca cervix	%
Illiterate	32	64%	12	24%	5	10%
Literate	18	36%	6	12%	2	4%

The no. of cases are more in illiterate group. The CIN and Ca cervix are more in illiterate group. Therefore it may be concluded that improvement of women literacy will reduce the development CIN and Ca Cervix.

Table 5: Distribution of cases according to per speculum findings

Per Speculum finding	No. of total cases	%	No. of CIN cases	%	No. of Ca cervix cases	%
Atrophy	2	4%	0	0%		
Hypertrophied, erosion	31	62%	12	24%	4	8%
Cervix flushed with vagina/ pulled up cervix	2	4%	1	2%		
Bleeds on touch	5	10%	3	6%	3	6%
Polyp	3	6%	1	2%		
Prolapse	4	8%	1	2%		
Growth	3	6%	0	0%	3	6%
Leukoplakia	1	2%	0	0%		

The leading finding is hypertrophied cervix and erosion(62%) followed by lesion bleeds on touch(10%). In the cases of CIN, the main finding is hypertrophied cervix and erosion(24%) followed by lesion which bleeds on touch(6%). In the ca cervix cases the leading finding is hypertrophied cervix and erosion(8%) followed by lesion which bleeds on touch(6%) and cervical growth(6%).The per speculum examination is very essential requirement for prevention and early detection of CIN and Ca Cervix.

DISCUSSION

The cancer cervix is the second commonest cancer in women. The high incidence is due to lack of awareness, low literacy rate and low socio economic status(8). The pathogenesis of ca cervix has a long period of pre invasive lesion and the lesion can be diagnosed by

screening methods and cancer cervix can be prevented by proper management of pre invasive lesion. We compared our results about the factors influencing the development of cancer cervix with those of others. We also compared complains of the patient and findings of per speculum examination with findings of the others.

Age Distribution

In the present study, the total cases are in the age group of 31-40 yrs. In the cases of CIN. The most cases are in the age group of 31-40 yrs. The cancer cervix also the cases are the highest in the age group of 31-40 yrs as well as 41-50 yrs. The age group is in the range 20-60yrs. It is similar to other studies referred to Table 1. The mean age is 40.5 yrs. It is similar to Saha R, Thapa M *et al*; Juneja *et al*; Karimi Zarchi *Et al*; Tata Memorial study.

Parity

In our study, the cases are CIN and cancer cervix are more with increased parity(>2). In our study the increased incidence of CIN and Ca Cervix is associated with high parity(P2). The other studies also showed similar results.

Duration of Marriage

The duration of marriage is directly proportional to duration of marriage. In the CIN group most cases had duration of marriage above 15 yrs. In the ca cervix group, highest no, of cases are beyond 15 yrs. It suggests that the women are married at an early age, thereby exposing them to HPV virus making them susceptible to cancer cervix. Saha and Thapa showed mean age of marriage at 21yrs. Ashmita *et al* showed prevalence of CIN cases of child marriage 13.5%(15yrs) and 68.75%(<18yrs) respectively. Therefore, early marriage is a risk factor in the development of CIN and Ca cervix.

Educational Status

In the present study, most cases are from illiterate section. Similar results are also shown by other studies.

Socio-economic status

The low socio-economic status are associated with higher incidence of CIN and Ca cervix. The early marriage, early child birth, lack of proper hygiene, lack of awareness, delayed reporting to health care provider, unstable marriage contributed to this result. In the present study majority of CIN cases belong to low socio economic status(76%). The comparative studies are shown in Table no 3.

Chief Complaint

The majority of the patient in our studies with CIN complains of white discharge(14%). It is similar to other studies. Our results are similar to those of others. However amount and duration of white discharge have no bearing in the development of CIN and Ca cervix.

Per Speculum Examination

In our study, the commonest finding was cervical erosion(62%). CIN was found in 24% of them. 10% of cases has lesion which bleeds on touch. 6% had cervical polyp and some visible growth in the cervix.

CONCLUSION

The high incidence of cervical cancer is worrisome in India. The lack of awareness, poor hygiene, lack of education, low socio economic status, inadequate health care contributed to such a dismal state. Absence of an adequate cervical cancer screening programme in Assam complicated the situation. The different factors like age, parity duration of marriage, educational status, socio economic status influence the development of CIN and early Ca cervix should be emphasized. The complains like white discharge, inter menstrual

bleeding, post menstrual bleeding, post coital bleeding should be investigated for CIN and Ca cervix. In Gynaecological examination speculum examination should be done to detect CIN and Ca Cervix taking the help of pap smear, visual inspection with acetic acid(VIA), colposcopy if necessary. The detection of cervical erosion, cervical lesion bleeds on touch, polyp, Cervical growth are vital in detecting CIN and early Ca cervix. In developed countries routine cervical screening programme lowered incidence of cancer cervix significantly which should be implemented in our country to achieve the same objective.

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