

STUDY OF ASSOCIATION OF SOME RISK FACTORS & CERVICAL DYSPLASIA/CANCER AMONG RURAL WOMEN

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ABSTRACT

Background: At the beginning of this century, cancer was 6th cause of death in industrialized countries, today it is the second leading cause of death. Cervical cancer contributes about 25-30% of all cancer cases.

Various other risk factors for cervical cancer are early age at marriage, multiparty with poor birth spacing between pregnancies, poor personal hygiene are common among the rural women, so this study is carried out to study the association of these risk factors with cervical dysplasia and cervical cancer.

Aims and Objectives: 1) To study the association of these risk factors with cervical dysplasia and cervical cancer 2) To give recommendations based on study.

Material and Methods: This is a cross-sectional study carried among the rural women in Beed district. All the married women undergoing pap smear were interviewed and pretested proforma was filled and pap smear were taken.

Results: out of total 462 women 399 (86.4%) were married before 17 yr of age and prevalence of dysplasia is about 19.04% among the women married before 17yrs. Of age and about 7.94 among the women married after 17yr of age. of the total 81 women 74 had their I st child before 20yrs of age, 26.31% women had more than four children and dysplasia was common in lower socioeconomic group.

Conclusion: present study highlights the significant association between risk factors so there is need to reduce these risk factors among rural women.

Key words: dysplasia, risk factor, Cancer cervix

INTRODUCTION

At the beginning of this century, cancer was 6th cause of death in industrialized countries; today it is the second leading cause of death¹. Worldwide there are over 10 million new cases of cancer and more than 6 million deaths from cancer annually; of the 10 million new cancer cases each year 4.7 million are in developed countries and nearly 5.5 million are in less developed countries². In India total 2-2.5 million

cases are present at any give point of time, with around 7 lakhs new cases are being detected each year and 3 lack deaths occur annually due to cancer³.

Cervical cancer is most common cancer in developing countries; about 80% of total cases are present in developing countries⁴.

Various other risk factors for cervical cancer are early age at marriage, coitus before the age of 18

years, multiple sexual partner, delivery of the first baby before the age of 20 years, multiparity with poor birth spacing between pregnancies, poor personal hygiene and women with STD, HIV infection, herpes simplex virus 2 and human papilloma virus (HPV) (16, 18, 31, 33)⁵ infection.

Cytological screening technique as advocated by papnicolaou and co-workers offers as simple and economic way to detect these dysplastic lesions at earliest stage without the use of elaborative technique⁶. In India, 75% of population is residing in rural area where in addition to factors like multiparity, early age at marriage, poor genital hygiene, other factor like negligence by patient to initial symptoms like leucorrhoea, postcoital bleeding; unawareness of symptoms, illiteracy and lack of adequate screening facilities are present which increases incidence among Indian women⁷.

MATERIAL AND METHODS

This study was conducted at the Preventive and Social Medicine Department at tertiary health care hospital in Beed District. This is a cross-sectional, hospital based study conducted for the period of one year. Pre-tested proforma specially designed for this purpose was used for interviewing the study subjects. Help of relative or attendant was taken during the interview in some cases where subjects were unable to answer few questions because of ignorance, language problem or old age. During the interview, purpose of study was explained to each respondent. Pap smear was obtained in each case from squamo-columnar junction of the cervix and smear was fixed by dipping the slide in the jar containing equal amount of ether and 95% of ethyl alcohol. Slides stained and graded according to papnicolaou method in the pathology department and reports were collected. During data collection opportunity was utilized to give health education regarding personal hygiene with special reference to genitourinary system, cervical cancer and Pap smear to the patient.

Slides were stained by using modified papricolou method⁸. Reporting was done by pathologist as per WHO classification system for cervical cytology⁹. Those who had mild and moderate dysplasia were told to repeat smear after 6 month. Those with severe dysplasia and ca cervix were treated accordingly.

RESULTS

It was observed that maximum women were married between 15-18 years i.e. 338 (73.16%) followed by 100 (21.44%) in 11-14 years of age, 22 (4.74%) in 19-22 years of age and only 2 (0.42%) married in above 22 years of age. Minimum age at marriage was 11 years, and maximum was 26 years.

Table 1: Distribution of women according to outcome of Pap smear

Outcome of the Pap test	No. of women Percentage
Normal smear	124 (26.83)
Inflammatory smear	239(51.73)
Mild dysplasia	31(6.70)
Moderate dysplasia	12(2.59)
Severe dysplasia	14(3.05)
Carcinoma in situ	01(0.24)
Frank invasive cancer	23(4.97)
Others	18(3.89)
Total	462(100%)

(Other includes 7 cases of cervicitis, 12 of Postmenopausal changes)

Mean age at marriage was 15.58 years with S.D. 1.86.

Prevalence of dysplasia was found to be 23% among women married between 11-14 years of age, followed by 16.56% in 15-18 years of age, 9.09% in 19-22 years of age. It was observed that maximum 143 (30.95%) women were had their childbirth at the age of 17 years, followed by 89 (19.25%) at 18 years, 35 (7.35%) at 19 years, 31 (6.70%) at 20 years and 22 (4.76%) above 20 years of age.

Minimum age at first childbirth was 13 years and maximum age was 32 years. Mean age at 1st childbirth was 17.29 ± 1.91. 88.88% of women with dysplasia had delivered their 1st child at or before 18 years.

It was observed that maximum i.e. 151 (32.07%) women were having three children's followed by 97 (20.99%) women having 4 children, 77 (16.65%) had 5 children, 56 (12.11%) had more than 5 children, 54 (11.68%) women had 2 children, 19 (4.09%) had 1 child and 8 women were nullipara.

Average parity was found to be 3.47±1.47 maximum parity observed among studied women was 9. Prevalence of dysplasia among women with parity 4 was found to be 22.68%,

for parity 5 it is 25.97% and for parity above 5 it is 26.79%.

Table 2: Relation of age at marriage and dysplasia in women undergoing Pap smear

Age at marriage (years)	No. of women with dysplasia/ Cancer cervix (%)	No. of women without dysplasia/ Cancer cervix (%)	Total (%)
≤ 17	76 (19.04)	323 (21.20)	399 (86.36)
>17	5 (7.94)	58 (92.06)	63 (13.63)
Total	81(17.53)	381 (82.46)	462 (100)

$\chi^2 = 4.52, df = 1, p = 0.05$

Statistically significant association between age at marriage and development of dysplasia/cancer cervix

Table 3: Relation of age at first childbirth and development of dysplasia among women undergoing Pap smear

Age at childbirth (years)	No. of women with dysplasia/ Cancer cervix (%)	No. of women without dysplasia/ Cancer cervix (%)	Total (%)
< 20	75 (19.18)	316 (80.82)	391 (86.12)
≥ 20	06 (9.52)	57 (90.48)	63 (13.63)
Total	81(17.84)	373 (82.16)	454 (100)

(N=454, as 8 women were nuliparous)

$\chi^2 = 5.47, df = 1, p = 0.02$

Out of total 81 women with dysplasia 75 (19.18%) women had their first child before 20 years of age. statistically significant association between development of dysplasia and carcinoma cervix.

Table 4: Relation of parity and dysplasia among women undergoing Pap smear

Parity	No. of women with dysplasia/ Cancer cervix (%)	No. of women without dysplasia/ Cancer cervix (%)	Total (%)
≤ 4	46 (13.98)	283 (86.02)	329 (71.21)
> 4	35 (26.31)	98 (73.69)	133 (28.78)
Total	81 (17.54)	381 (82.46)	462 (100)

$\chi^2 = 8.96, df = 1, p = 0.02$

Table 5: Relationship of socio-economic status and development of dysplasia / ca cervix

Socio-economic status	Dysplasia present	Dysplasia absent
Class I	1	2
Class II	1	26
Class III	2	32
Class IV	32	138
Class V	45	183
Total	81	381

$\chi^2 = 6.80, df = 2, p = 0.05$

Above table shows relation of parity and development of dysplasia/carcinoma cervix among women undergoing Pap smear.

It was observed that 133 (28.78%) women were having parity more than 4 significant association was present between multiparity and development of dysplasia / carcinoma cervix.

DISCUSSION

Present study has noted the prevalence of various dysplasia about 12.7% and cancer cervix 4.74%.present study has also noted age at marriage below 17yrs, age at first childbirth below 20 yrs, high parity and development of ca cervix. it was observed that 438(94.5) of women married before 18 yrs of age it may be due to the ignorance towards the marriage act by rural population. In the present study nearly 72.41% women had more than 4 children it is due to low level of education and less awareness about family planning services.

D. K. Dutta et al (1990)⁹ observed that relative risk of acquiring disease was six times more in cases of women who had first parity before 18 years $p < 0.001$ as compared to those who had first parity after the age of 18 years.

A.ROY et al (1990)¹⁰ noted that of the total 221 women with dysplasia, 153(67.4%) had more than four children. Various studies showed significant association between above mentioned factors and ca cervix.(9-12)

CONCLUSION

Considering the high prevalence of cervical cancer and various risk factors among rural women, community based screening camps should be arranged so as to reduce the morbidity among rural women. As significant

association between age at marriage below 17 yrs, age at first childbirth less than 20 yrs, high parity and act regarding age at marriage should be strictly implemented in rural areas . Importance of family planning services for spacing and limiting childbirth need to be disseminated among rural women.

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