

## CASE CONTROL STUDY OF MALE RISK FACTORS FOR CERVICAL CANCER IN DEVELOPING COUNTRY

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### SUMMARY

Fifty four women between 25-50 years of age group with histologically confirmed cervical cancer alongwith their husbands were studied to find out the male risk factors in the etiology of cervical cancer.

Poor genital hygiene was a significant risk factor in the case husbands viz.85% as against 25.9% in control husbands with odds ratio of 16.4%. Other risk factors were genital lesions, multiple sex partners especially prostitutes, emotional stress and nonuse of condoms.

### INTRODUCTION

Cancer of the cervix is almost unknown in nuns. Indeed, the practice of coitus is now established as being a prime cause of cervical malignant disease - intraepithelial or invasive. Numerous epidemiological studies of cervical carcinoma have shown that women with early age at first coitus, high parity and multiple sex partners are at increased risk of developing the disease. However, the role of the male consort has received limited attention. Recently, few studies have highlighted the need for

considering not only the female, but also the male influence on the risk of cervical cancer, as the sexual behaviour of the male consort appears to play an important role. This study is an effort to highlight the role of male risk factors in the causation of cervical cancer.

### MATERIAL AND METHODS

The study was conducted in the Gynaecology Department of Jawaharlal Institute of Postgraduate Medical Education and Research, Pondichery, South India, from May 1992 to August 1993. The study group comprised of 54 women (20-50 years

of age) with histologically confirmed cervical carcinoma along with their husbands. Age matched 54 women with no cervical cancer along with their husbands were taken as controls. All these women had single lifetime partners only.

The husbands were called for personal interview and physical examination for any genital lesions. The details were filled in a structured proforma which included the age and educational status of the husband, occupation, addictions, number of marriages, sex partners, history of genital lesions, use of condoms for long periods, mobility away from home and unstable sexual relationship or broken marriage.

### OBSERVATIONS

The mean age of women was 38.75 years with a range of 25-48 years and the mean age of husbands was 47.35 years with a range of 35-63 years in both the groups. All the patients belonged to poor socioeconomic group and were educated

upto primary standard.

The mean age at marriage in females and first coitus was 17.25 years in the study group and 18.25 years in the control group.

Six (11.1%) case husbands gave history of two marriages and 1% three marriages; whereas in the control group, only 2 (3.7%) husbands gave history of two marriages (Table I).

Twenty-eight (51.85%) case husbands had multiple sex partners, as against only 9 (16.6%) in the controls. Of these, 15 (53.1%) case husbands had prostitutes as sex partners as against only 3 (33.3%) in the control group.

Forty-six (85.1%) case husbands were with poor genital hygiene as against only 14 (25.9%) in the controls. Fifteen (27.7%) case husbands had genital lesions in the form of ulcers, penile scars, leukoplakia and hydroceles, as against 5 (9.25%) controls. Condoms were never used by 92.58% of case husbands as against 81.4% controls.

Table I  
Risk factors in study group vs control group

	Case husbands (n=54)	Control husbands (n= 54)	P value	Odds ratio
Multiple marriages	6 (11.1%)	2 (3.70%)	< 0.05	3.25
Multiple sex partners	28 (51.85%)	9 (16.6%)	< 0.05	5.86
Prostitutes as sex partners	15/28 (53.11%)	3/9 (33.3%)	< 0.05	6.53
Poor genital hygiene	46 (85.1%)	14 (25.9%)	< 0.01	16.42
Genital lesions	15 (27.7%)	5 (9.36%)	< 0.05	3.92
Condom never used	50 (92.58%)	44 (81.4%)	> 0.05	10.00 N.S.
Frequent coitus	9 (16.6%)	1 (1.8%)	< 0.01	10.60

Eighteen (16.6%) of case husbands were involved in very frequent (daily) coitus as against 1.8% of controls.

### DISCUSSION

Cervical cancer is a common disease in India. Sexual behaviour has been regarded as an important factor in cervical carcinogenesis since 1842. The venereal nature of cervical squamous metaplasia, strongly suggested by demographic and epidemiological evidence has prompted many workers to regard the woman as the host and her male sexual consort as the vector of the carcinogenic agents. This is evidenced by the results of the present study which shows that in addition to the well known female factors, multiple risk factors in their male consorts are also important and keep the women at high risk of developing cervical cancer. They found that the cases were 5.3 times more likely to be married to husbands who had 20 or more sexual partners than were controls. The present study did not find any difference in the age at first coitus between the study group and the control group unlike that observed by Zungunegui et al (1986).

Chou (1991) from Taipei has also reported the important psychosocial risk factors like discontented home situation, occupations entailing mobility away from home for long periods and coital frequency as in our study. The largest group of case husbands in the present study visiting prostitutes were lorry drivers, with long absence from home.

Kjaer et al (1991) have pointed to the importance of 'high risk males' for the development of cervical cancer in their sexual partner in a case control study in

Denmark. They observed the history of genital wart in the male (RR=17.9 for ever vs. never) and ever having used condoms (RR=0.2) as the most significant risk determinants. The non-use of condoms in the case husband and control group was not statistically significant in the present study but quite a significant number of non-use of condoms (92.58% in case husbands and 81.4% in controls) cannot be ignored and the importance of using condoms during coitus with prostitutes must be stressed to the male consorts of our group of patients more than 80% of whom were sterilized. Kjaer et al (1991) also found the visit to prostitutes or multiple sexual partners as important risk factors, though not statistically significant.

The observations of the present study are supported by those reported by Brinton et al 1989. They also found that the risk increased significantly ( $p=0.005$ ) with number of sexual partners reported by the husband and low educational status of the husband was also an important predictor of risk, possibly indicating the role of unmeasured aspects of sexual behaviour. They did not find the visits to prostitutes and sexually transmitted disease histories important predictors as shown in the present study. However, poor genital hygiene seems to be involved as shown by the examination of the husbands in both the studies.

The importance of multiple sexual partners and poor genital hygiene in the etiology of cervical cancer has also been shown in a rural Chinese population by Zhang et al (1989). In disagreement to our results, they observed that the case husbands had the age of first coitus earlier than that of the controls. But as

shown in the present study, their study also supports the infectious nature of cervical cancer and indicates the importance of educating and preventing men from having high risk sexual behaviour.

### CONCLUSIONS

In a developing country like India, where mass screening is not feasible, educating the men to maintain good genital hygiene, avoid multiple sex partners and use of condoms may help in reducing the inci-

dence of cervical carcinomas.

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