

SOCIO-ECONOMIC PROFILE OF WOMEN WITH CERVICAL DYSPLASIA*

(Study of 100 Cases)

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Introduction

Preventive medicine is nowadays receiving much attention. The aim of preventive medicine is not only to prevent diseases but to recognise them early. The value of early diagnosis by cytology screening is undisputed. The problem remains however of practicability of screening procedure and readiness on the part of all segments of population to participate in them. In view of the large number of studies conducted on the epidemiology of cancer cervix, it is possible for the epidemiologist to define high-risk groups as exactly as possible and to find a way of approaching these women and encouraging them to undergo cytological examination.

This communication discusses first part of above statement that is to recognise high risk groups as exactly as possible.

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Material and Methods

Cytology service was set up at Cama & Albless Hospital in 1970. Cytological findings of 19,854 patients seen in the last 8 years is as follows.

Normal and inflammatory	18,529	—	93.3 %
DYSPLASIA			
Mild	318	1.60%	
Mod	180	.90%	557 — 2.8 %
Severe	59	.29%	
Carcinoma in situ (C.I.S.)	41	—	.2 %
C.I.S. microinvasion	9	—	.04%
Invasive	341	—	1.71%
Suspicious	88	—	.44%
Unsatisfactory	284	—	1.43%
Ovarian cancer	5	—	.02%

In view of high incidence of dysplasia and cervical cancer in our country, 100 patients showing dysplasia were selected for detailed analysis of their socio-economic profile. The factors which were studied in detail were

- (1) Age at marriage
- (2) Number of years of married life
- (3) Gravidity
- (4) Presence of other factors like infection, trichomonas, loop, venereal disease, malnutrition, diabetes, vitamin A deficiency, pregnancy, hormone deficiency and prolapse.

Analysis of Results

Table I—Analysis on basis of age at marriage.

It was found that as many as 42% of them were married by the time they were 15 years old, thus they were initiated into sex early and 73% (42% + 31%) of these women were married before the age of 19. Sexual behaviour is widely considered as an influencing factor on cancer cervix.

Adelusi (1977) in his analysis of 114 cases of cancer cervix on basis of their coital characteristics has shown that 79.8% had their first sexual intercourse before the age of 20.

Emoron (1977) in his study of 50 cases of cervical cancer has reported that 88% of them had their first sexual intercourse before the age of 18.

TABLE II—Analysis on basis of number of years of married life.

There is even distribution of mild dysplastic cases when a woman is married for 10, 20, or 30 years but incidence of moderate and severe dysplasia increases with increase in number of years of married life.

TABLE-III—Analysis on basis of Gravidity

TABLE I
Age at Marriage

Dysplasia	Age at Marriage			Total
	10-15 Yrs.	16-18 Yrs.	19 Yrs. & above	
Mild	28	21	24	73
Moderate	9	7	3	19
Severe	5	3	0	8
Total:	42	31	27	100

* 1 unmarried.

TABLE II
Number of Years of Married Life

Dysplasia	10 yrs.	20 yrs.	30 yrs.	40 yrs.	50 yrs.
Mild	19	22	21	8	2
Moderate	1	4	8	4	2
Severe	0	5	3	0	0
Total:	9	40	41	9	1

* 1 unmarried.

TABLE III
Gravidity

Dysplasia	Gr. 0	Gr. I-III	Gr. IV-VI	Gr VII-IX	Gr. X
Mild	8	28	29	7	1
Moderate	1	9	7	2	0
Severe	0	3	5	0	0
Total:	9	40	41	9	1

There was even distribution of mild, moderate and severe dysplastic patients from gravidity I to IV. However, analysis of the normal population in general hospital patients shows that maximum number of patients do fall in the same range of gravidity, I to VI, so gravidity by itself does not reflect on socio-economic status of patients showing dysplastic lesions.

TABLE-IV—Analysis on basis of presence of other factors.

From this Table it is evident that out of 100 cases 75 were suffering from chronic non-specific infection of which 24 had trichomonas infection. There were 19 cases showing mild oestrogenic deficiency leading to decrease in resistance of local tissues. There were as many as 14 of them suffering from severe degree of malnutrition and vitamin A deficiency, 9 of them were showing dysplasia due to presence of loop, 4 were diabetic, 4 were suffering from tuberculosis, and 2 were serologically positive for venereal disease.

Herpes infection is an important factor reported in many of the studies carried out abroad. We were not able to evaluate it mainly as facilities for serology against herpes are not available and secondly very few cases of herpes are seen in our clinic.

So far all these cases were analysed taking one factor into consideration at a time, that is supposing one factor played an important part in one case some other factor played an equally important part in the other case. To get an overall picture of socio-economic profile of a patient all the risk factors should be considered collectively and not individually. So we devised a method of scoring as shown in Table V. Left side of the Table shows

TABLE IV
Presence of Other Factors

Dysplasia	Infection	Trichomonas	Hormone deficiency	Loop	Pregnancy	Prolapse	Diabetes	V.D.	T.B.	Malnutrition Vit. A Def.
Mild	35	18	13	6	7	3	4	1	3	11
Moderate	12	3	6	3	0	3	0	1	1	1
Severe	8	3	0	0	1	0	0	0	0	2
Total:	75	24	19	9	8	6	4	2	4	14

TABLE V
Risk Factors and Scoring

Factors	SCORE				
	0	1	2	3	4
Age at marriage	19 or above	16, 17, 18	13, 14, 15	—	—
No. of yrs. of married life	10 yrs.	20 yrs.	30 yrs.	40 yrs.	50 yrs.
Infection	—	1	—	—	—
Trichomonas or V.D.	—	1	—	—	—
Loop	—	1	—	—	—
T.B., Malnutrition	—	1	—	—	—
Vit. A Deficiency	—	1	—	—	—
Gravidity	— III	IV-VI	VII-IX	X	—

the various risk factors that were considered for scoring and the rate of scoring was done as shown on the right side of the table. For patients married at the age of 19 or above no score was given, for those who got married at the age of 16, 17 or 18 score of 1 was added, for those who got married below the age of 15, score of 2 was added. Similarly for 10 years of married life no score was given, for 20 years of married life score of 1 was added, for 30 yrs of married life score of 2 was added and so on. For presence of each of the factors like infection, trichomonas, venereal disease, loop, score of 1 was added, for presence of tuberculosis malnutrition and vitamin A deficiency collectively a score of 1 was added. For gravidity 0 to III no score was added, for gravidity IV to VI score of 1 was added, for gravidity VII to IX score of 2 was added.

To illustrate the importance of this 2 cases are presented as shown in Table VI. Although both the cases had a total score of 6, there were different risk factors involved in both the cases. Case A, although she was gravida II, she was serologically positive for venereal disease and she had tuberculosis, malnutrition

and Vitamin A deficiency contributing to dysplasia, whereas in case B it was the gravidity and trichomonas infection which contributed to dysplasia. In this way we determined the score of all the 100 patients and grouped them as shown in Table VII.

All cases showing a score of 1 to 3 were put in group A, all cases showing score of 4 to 6 were put in group B and all cases showing score of 7 to 10 were put in group C. It was observed that majority of mild dysplastic patients showed a score of 1 to 3, majority of moderately dysplastic patients showed a score of 4 to 6 and majority of severely dysplastic patients showed a score of 7 to 10. This was statistically analysed. χ^2 value came to 14.556 with probability (P value) less than .001 and it was statistically found as highly significant.

Thus we can come to the conclusion that the more the social factors present which individually encourage development of cancer, greater the risk of that woman developing cancer.

Discussion

There have been a large number of studies conducted on epidemiology of

TABLE VI

Case	Age at marriage	No. of married life	Infect	Trich.	Loop	V.D.	T.B. Mal-nutr. Vit. A Def.	Gravida	Score
A	11	20	1	-	-	+	+	II	6
Score	2	1	1	0	0	1	1	0	6
B	10	25	+	+	-	-	-	VI	6
Score	2	1	1	1	0	0	0	1	6

TABLE VII
Score of 100 Cases

Dysplasia	A Score 1-3	B Score 4-6	C Score 7-10	Total
Mild	39	28	6	73
Moderate	4	12	3	19
Severe	0	3	5	8
Total	43	43	14	100

cancer cervix, many of them have been reviewed by Rotkin (1967, 1973).

Variable	No. of studies	Mean ratio cases; control
First marriage under 20 or 21	13	1.4
Two or more marriages	7	1.8
Sexual initiation before 20	5	1.5
Sexual initiation before 17	4	2.4
Two or more sexual partners	3	1.7
Divorces and separations	6	2.3
Unstable sexual relationships	4	2.0
Coital frequency	6	1.1
Mean age at menarche	3	1.0
Contraceptive practice	5	1.0
Partners not circumscised	7	1.1

Rotkin (1967, 1973) has summarised a large number of studies as can be seen from this table and variants which were found to be significant in cases: control studies were first marriage under 20, 2 or more marriages, sexual initiation before the age of 20, 2 or more sexual partners, divorces separations and unstable sexual relationships. Co-relation with age at sexual initiation was even higher if division was taken at the age 17.

Some variables which were suspected in the past as being associated were found to be not related when a number of studies were summarised by Rotkin (1968) and these variables were coital frequency, mean age at menarche, contraceptive practise, and partners not circumscised.

Summary

Through epedemiology, we hope to gain information regarding which life patterns and which external influences favour development of cancer cervix. In this way, we could predict the type of person most likely to develop the disease. This paper presents socio-economic profile of 100 dysplastic patients, lays stress on some of the risk factors and also lays stress on the fact that all the risk factors should be considered collectively and not individually.

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