

# DETECTION OF UTERINE CERVICAL DYSPLASIA AND CARCINOMA CERVIX BY CERVICAL CYTOLOGY

by

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## SUMMARY

A clinicopathological study was carried out on 5778 cases attending gynaecological O.P.D. from January 1979 to December 1984. Cytological smear was taken from all of them. Cervical biopsy was taken from patients showing cervical dysplasia. Histopathological correlation was made. Incidence of dysplasia was 2.2% in our series.

### Introduction

Carcinoma of the uterine cervix is the commonest malignancy of Indian women (Luthra 1976). It takes up between 20-25% of all neoplasms of female genital tract. (S. Kumari *et al*, Cytology, Res. Centre, New Delhi). The past three decades have produced a significant increase in the understanding of the epidemiology, natural history, diagnosis and treatment of cervical cancer. Carcinoma cervix does not arise *de novo*, but it is the final step in the chain of events occurring in cervical epithelium at transformation zone. The transformation zone, when exposed to carcinogenic agents, undergoes a typical metaplasta in the form of progressive grades of dysplasia, Dysplastic changes may regress or persist and progress to CIN and invasive cancer (Luthra *et al* 1969). Mass cytologic screening pro-

grammes have resulted in an increase in early diagnosis and decrease in the incidence of invasive cancer. Improvements in prevalence, incidence and mortality statistics in extensively screened areas have suggested that invasive cancer at the cervix is potentially preventable if only the diagnostic expertise could be brought into service.

Cytologic screening continues to be the most important method for early diagnosis. Once cervical intraepithelial neoplasia (CIN) is diagnosed, the patient has good assurance of satisfactory treatment and outcome.

### Material and Methods

The study was carried out at Main Hospital & Research Centre, Bhilai from 1979 to 1984 on women showing cervical lesions, women having symptoms like menstrual irregularity, post coital bleeding and post menopausal bleeding per vaginum. Cases of frank invasive cancer were excluded from the study. A detailed clinical history including age, age at marriage and first childbirth, number of

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children, socio-economic status, religion and clinical complaints were recorded. Smears were taken from surface of exocervix by wooden spatula and were stained by Papanicolau's technique. Smears were classified into five groups on the basis of criteria adopted by Mali *et al* (1999). Only positive smears with different grades of dysplasia and carcinoma in situ were taken for study. Cervical biopsy was performed in all cases with positive smears for histopathological correlation. Histopathological correlation was performed on hysterectomy and cone biopsy specimens in which ever case it was necessary as a definitive treatment.

### Observation

Of the 5778 cases who underwent detailed clinical and cytological examination, cervical dysplasia was detected in 132 cases (2.2%). Ca-in-situ was diagnosed in one case.

TABLE I  
Classification of Smears According to Various Grades of Dysplasia

Grade of Dysplasia	Total No. of cases	Percentage
Mild	114	86.06
Moderate	9	6.8
Severe	9	6.8

(a) Age distribution: Mean age of cervical dysplasia was 35.4. The highest incidence of various grades of dysplasia (50%) was noted in the 4th decade of life followed by 26.5% in the 5th decade of life. Very low incidence of dysplasia was noted in later group.

TABLE II  
Age Distribution

Age	No. of cases	Percentage
20-29	11	8.3
30-39	66	50
40-49	35	26.5
50-59	13	9.8
60-69	5	3.8
70-79	2	1.6

(b) Dysplasia was common in women having more than 3 children. The incidence was very low in nulliparous women.

(c) Dysplasia was commonest in the very low socio-economic groups.

(d) Dysplasia was common among women showing cervical erosion—121 (91.6%). Second common symptom of dysplastic women was irregular menstrual bleeding—83 (62.8%) of women with cervical dysplasia presented with irregular menstrual bleeding; post coital bleeding without obvious cervical lesion was the presenting symptom in—9 (6.8%). Prolapse was the presenting symptom in 2 (1.5%) of cases.

TABLE III  
Cytological Correlation with Clinical Findings

Findings	Total No. of cases	Percentage
Irregular menstrual bleeding	83	62.8
Cervical erosion	121	91.6
Post Coital bleeding	9	6.8
Prolapse	2	1.5

Maximum number of cases of dysplasia came with the complaints of irregular menstrual bleeding and post coital bleeding and on examination showed cervical erosion.

TABLE IV  
Histopathological Correlation of Dysplastic Smear

Diagnosis	Total No. of cases	Percentage
Chronic Cervicitis	99	75
Mild dysplasia	15	11.4
Moderate dysplasia	7	5.3
Severe dysplasia	4	3
Ca-in-situ	4	3
Microinvasiav Ca	3	2.3

Out of the 132 cases studied, 99 cases (75%) showed chronic cervicitis on cervical biopsy. 26 cases (19.7%) showed cervical dysplasia of various grades, mild 15 cases (11.3%), moderate 7 cases (5.3%) and severe 4 cases (3%). Four cases (3%) showed Ca-in-situ. Microinvasive carcinoma was detected in 3 cases (2.3%).

Marital Status: All the women studied were married.

#### Discussion

The incidence of dysplasia in our series was 2.2%. This was in accordance with that of S. Kumari *et al* 2.4%. In Mali *et al's* series it was 5.6%, Dysplasia was commonest in age group of 30.39 years (50%) in our series. It was in accordance with Upreti and Rohtagi (1981) and Wahi *et al* (1969). Dysplasia was uncommon below the age of 20 years and above the age of 80 years. Dysplasia was more common among women having more than 3 children and less common among nulliparous women. Similar findings were reported by Wahi *et al* (1969). Women with low socio-economic status

were more prone to dysplasia due to frequent childbirth prevailing amongst them associated with poor personal hygiene and increased incidence of local infection. Irregular menstrual bleeding was the commonest presenting symptom and cervical erosion was the commonest findings amongst women with dysplasia. Chronic cervicitis was the commonest (75%). Comparatively high incidence of Chronic Cervicitis and low incidence of dysplasia in biopsy specimen indicates regression of mild dysplasia after treatment of infection. Histopathological findings amongst women with dysplasia shows that local infection is the predisposing factor for dysplasia which may regress after treatment of local infection, but in few cases (less than 15%) may progress to malignancy. We could detect 4 cases of Ca-in-situ and 3 cases in microinvasive stage as a result of our study.

#### Conclusion

The incidence of dysplasia of cervix of all grades was found to be 2.2%. The incidence was highest in married women in their 4th decade of life and having more than 3 children. It was highest among patients with low socio-economic group. Irregular menstrual bleeding was the commonest presenting symptom and cervical erosion was the commonest finding.

Cytologic screening continues to be the most important method for early diagnosis of cervical intraepithelial neoplasia (CIN). Once cervical intraepithelia neoplasia is diagnosed the patient has good assurance of satisfactory treatment and outcome.

References

1. Kumari, S., Bhatia, R., Agarwal, D. S., Mitra, A. B. and Luthra, V. K.: Indian J. Med. Res. 75: 83: 1982.
2. Luthra, V. K., Mali, S. and Wahi, P. N.: Indian J. Med. Res. 57: 629, 1969.
3. Mali, S., Luthra, V. K. and Wahi, P. N.: Indian Journal Med. Res. 57: 624, 1969.
4. Upreti, S., Rohtagi, P.: Journal of Obstet. Gynec. India. 31: 834, 1981.
5. William, C., Fetherston: Clinical Obstet. Gynec. 26, 1983.
6. Wahi, P. N., Luthra, V. K. and Mali, S.: Indian J. Med. Res. 57: 617, 1969.