

## COLPOSCOPY IN 100 CASES OF EROSION CERVIX

by

S. BANDI

P. PUROHIT

and

S. MITTAL

### SUMMARY

(1) In this small series of 100 consecutive cases of erosion cervix studied, 6 cases of cancer were detected. They were found in the age group of 40 and above and in para IV onwards. They all showed atypical transformation zone on colposcopy and dysplasia on cytology.

(2) Erosion cervix is a misleading term in modern gynaecology and a red patch around the external os of cervix is not always benign; it should be looked with suspicion in older age group. Colposcopy, Cytology and directed biopsy are very useful diagnostic aids for early detection of preclinical carcinoma of cervix.

(3) Colposcopy, cytology co-relation was 82%. While colposcopic and histological co-relation was 80% in our series.

### Introduction

Colposcope provides a technique primarily for visualisation of visible portion of cervix, vagina and vulva. We can examine physiological, pathological and inflammatory changes of squamo-columnar junction and it has added advantage of selecting the optimum site for biopsy, but we cannot absolutely depend upon colposcopy for diagnosis of carcinoma because if squamo-columnar junction ascends into the endocervical canal the lesion cannot be visualised. Cytology is the most practical method for cervical cancer screening and both methods are actually complementary to each

other. Cancer does not occur suddenly and it is preceded by series of changes in the epithelium which are described as varying degrees of dysplasia.

### Material and Methods

One hundred consecutive cases of erosion cervix referred to colposcopy and Cryosurgery clinic at M.Y. Hospital during the period of June '81 to September '82. It was random selection of cases of reproductive, menopausal and post menopausal age group. Patients were interviewed according to proforma (including any history of puerperal pyrexia) and detailed findings of vaginal and speculum examinations were recorded. Smears for cytology were taken before colposcopy. The cervix was exposed by cusco's speculum, cleaned with normal

*From: Department of Obstetrics and Gynaecology and Department of Pathology, M.G.M. Medical College, Indore (M.P.).*

*Accepted for publication on 14-7-83.*

saline and painted with 3% acetic acid and then studied by colposcope under the magnification of 15 x and 22 x. Findings were noted on Hammond's graph as per colposcopic terminology (1975).

Biopsy was taken from the abnormal looking areas by biopsy forceps. Atypical transformation zone on colposcopy and dysplasia on cytology were considered as abnormal findings for detection of cancer. Colposcopic, cytological and biopsy findings were analysed and correlated, patients were treated accordingly by cryosurgery, hysterectomy or radiotherapy.

#### Observations

The cases were divided into 2 groups of 50 each.

#### Group A

50 cases in whom only colposcopy and cytology were done.

#### Group B

50 other cases of erosion in whom along with colposcopy and cytology, colposcopically directed biopsy was also performed.

Colposcopic findings of the 100 cases studied have been illustrated in Table I. This shows that the cases which were labelled as erosion cervix on speculum examination were not all erosion cervix, various

TABLE I  
Colposcopic Findings of 100 Cases

Colposcopy	Gr. A	Gr. B
(A) Normal colposcopic findings	47	31
(B) Abnormal colposcopic findings (A typical transformation zone)	2	19
(C) Unsatisfactory	1	—
(D) Miscellaneous	—	—

atypical patterns were evident on magnified view in 21 cases and in 1 case examination was unsatisfactory as squamo columnar junction was not visible. The 2 cases showing abnormal colposcopy in group A had inflammatory cytology.

It was interesting to note that out of 9 cases reported as dysplasia above the age of 40 years, 6 cases were found to have malignancy (Table II).

Atypical transformation zone, dysplasia and puerperal pyrexia was observed more commonly among multiparous patients having 4 or more children (Table III). All cases of cancer were found in parity 4 and above.

TABLE II  
Relation of Age With Colposcopic and Cytological Abnormality and Malignancy

Age group in years	No. of cases studied	Colposcopy showing atypical transformation zone	Cytology showing dysplasia	Malignancy on histology
20 - 29	18	4	2	0
30 - 39	41	5	2	0
40 - 49	38	10	7	4 CIS
50 and Above	3	2	2	2-Invasive Cancer

TABLE III

*Relation of Parity to Colposcopic Abnormality, Cytological Abnormality, Puerperal Pyrexia and Cancer*

Parity	No. of cases studied	Colposcopy showing atypical transformation zone	Cytology showing dysplasia	Puerperal pyrexia	Malignancy on histology
1	3	1	0	1	0
2	13	1	0	2	0
3	25	3	2	3	0
4 and above	59	16	11	27	6

On cytology, inflammatory smear constituted the major bulk of cytological findings. 77% smears were inflammatory and 13% showed mild to severe dysplasia (Table IV). In group A, 1 case showing dysplasia was normal on colposcopy.

TABLE IV  
*Findings on Cytology*

Cytological findings	Gr. A	Gr. B
Negative	6	4
Infections (acute and chronic)	43	34
Dysplasia	1	12
Positive for malignancy	0	0
Unsatisfactory	0	0

Various findings on histology are analysed in Table V. 60% of cases had acute and chronic inflammation of cervix.

TABLE V

*Histological Findings in 50 Cases of Gr. B.*

Normal	5
Acute and chronic cervicitis	30
Dysplasia	9
C I S	4
Invasive cancer	2

In 50 cases of group B maximum abnormalities were detected in multiparous patients (Table VI). Nineteen cases of atypical transformation zone were seen, 12 showed dysplasia on cytology and directed biopsy revealed 9 cases of dysplasia, 4 carcinoma in situ and 2 invasive cancer (Table VI).

Thirty cases normal on colposcopy showed negative or inflammatory smear. Out of 19 cases of atypical transformation zone, 11 showed dysplasia and 8 showed negative or

TABLE VI

*Relation of Parity With Colposcopic Cytological and Histological Abnormalities in Group B*

Parity	No. of cases	Colposcopy showing atypical transformation zone	Cytology showing dysplasia	Biopsy showing dysplasia and cancer
1	1	0	0	0
2	5	1	0	1 Dysplasia
3	12	3	1	1 Dysplasia
4 and above	32	15	11	7 Dysplasia 4 CIS 2 Invasive cancer

inflammatory smear. One case was normal on colposcopy but showed dysplasia on cytology. Thus colposcopy and cytology co-relation was in 41 cases (82%).

Twenty-eight cases had normal colposcopy and negative or inflammatory histopathology. Out of 19 cases of atypical transformation zone, 12 showed abnormality (6 dysplasia + 6 cancer) and 7 had negative or inflammatory histopathology. Three cases were normal on colposcopy but showed dysplasia on histopathology. Thus co-relation between colposcopy and histology was in 40 cases (80%).

#### Discussion

Papanicolaou smear is good for screening and colposcope is of immense help for directed biopsy. Cytology and colposcopy were unfortunately considered competitive methods in early detection of carcinoma cervix. But it is now realised that these methods are not competitive but rather complementary and that each has its particular limitations and strength in detecting cervical cancer.

Frequency of colposcopically directed biopsies resulting in detection of preclinical cases of carcinoma cervix (Table VII).

TABLE VII

*Frequency of Cancer Detection by Colposcopy*

Held (Zurich)	2.8%
Limburg	9.8%
Brentano	11.3%
Bungart	10.08%
Present Series	6.0%

According to Navratil (1958) the principle importance of colposcopy is not only in the recognition of suspicious area but also in definite estimation of benign changes. Thus the number of superfluous biopsies will be considerably reduced.

Our diagnostic accuracy with colposcopy was 80%, which is lower than the observations of other workers (Table VIII).

TABLE VIII

*Diagnostic Accuracy With Colposcopy Comparison With Other Workers*

Scott	1967	90%
Donohue	1972	88%
Stafe and Mattingly	1973	85%
Iyer <i>et al</i>	1981	87%
Dey and Rath	1981	85.9%
Present Series	1982	80%

#### Acknowledgement

We are thankful to Dean, Medical College and Superintendent of the Hospital for allowing us to use hospital records for this study.

#### References

- Berghardt, E. and Bajaree, F.: Quoted by Reference 6.
- Cruickshank, D. P., Kaminsky, D. B. and Ekbiadhlev, J.: *Reprodu. Med.* 17: 327, 1976.
- Donohue, L. R.: *Am. J. Obstetrics and Gynec.* 113: 107, 1972.
- Dey, A. K. and Rath, H.: *J. Obstet. Gynec. India*, 31: 619, 1981.
- Tunk, Brentano, P.: Quoted by Reference 6.
- Held, E.: Quoted by Reference 6.
- Iyer, S. J.: *J. Obstet. Gynec. India*, 31: 495, 1981.
- Limburg, H.: *Am. J. Obstet. Gynec.* 75: 1298, 1958.
- Navratil, E.: *Progress in Gynaecology Vol. III, Meigs and Sturgis, New York, London 1957 Grune and Stratton, Page 99.*
- Navratil, E.: *Trn. J. Obstet. Gynec.* 75: 1292, 1958.
- Scott, J. W. and Brass, P.: *Am. J. Obstet. Gynec.* 103: 925, 1969.
- Staff, A. and Mattingly, R. F.: *Obstet. Gynec.* 41: 68, 1973.