

A CLINICO-PATHOLOGICAL STUDY OF THE BENIGN LESIONS OF THE CERVIX@

by

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Benign lesions of the cervix are the commonest causes of chronic ill health in gynaecological practice and of these, non-specific chronic cervicitis and cervical erosion are most frequently encountered. They are frequent causes of morbidity in the form of pelvic pain, leucorrhoea, backache, dysuria etc. Various workers have reported varying incidence of cervicitis in their series. Kleegman (1940) reported an incidence of cervicitis as 20% in nulliparous and 78% in multiparous women. Ross (1950) reported an incidence of cervicitis and cervical erosion as 36% in his cases, while Ratnavati (1953) and Chakravarti (1954) found an incidence of cervicitis in 17.3% and 27.1% respectively in their series. The present work was undertaken to find out the incidence of benign lesions of the cervix in our

gynaecological patients and to carry out detailed clinical, bacteriological and histopathological study in these cases.

A vaginal and speculum examination was done in the cases attending the gynaecological out-patients department to find out the incidence of the benign lesions of the cervix. Two hundred and thirty cases clinically diagnosed as having lesions of cervix were selected for study from the out-patients department of Upper India Sugar Exchange Maternity Hospital and Dufferin Hospital, Kanpur.

A detailed history of the present complaints along with age, social status, menstrual and obstetric history and family history of tuberculosis was taken in every case. The cases were then subjected to thorough systemic, vaginal and speculum examinations. The following investigations were done:

(1) Cervical swab study, smear and culture examinations and hanging drop examination for trichomonas vaginalis infection.

(2) Silver probe test to assess the friability of the cervix.

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(3) Schiller's test to find out the extent of the lesion.

(4) Cervical biopsy.

(5) Polypoid growth, if present, was removed for detailed histopathological study.

Observations

Incidence of benign lesions of the cervix in 1750 patients attending the gynaecological clinic was found to be 13.4%. Speculum examination carried out in 500 antenatal cases (usually after 5 months) showed the presence of cervical erosion in 63.4% of the cases. Erosions were mostly follicular in type.

Two hundred and thirty clinically diagnosed cases of benign lesions of the cervix were taken up for detailed study. Table 1 shows the various types of lesions seen in these cases.

rior lip, while in three cases cervix was covered with large papillae which bled on touch.

It would be worth while mentioning that out of 230 cases of clinically diagnosed benign lesions of the cervix two cases turned out to be carcinoma in situ and five squamous cell carcinoma, which shows the importance of detailed examination.

Benign lesions of the cervix were found to be commonest between 20-40 years of age, contributing to 70.4% of the cases. All the cases of mucous and fibroid cervical polyp were in the older age group of 40 to 45 years. Five out of 12 cases of tubercular cervicitis were found in the age group below 25 years, 5 cases were in age group 26 to 35 years and two cases between 36 and 40 years.

Ten patients out of 230 were nul-

TABLE I
Showing various lesions encountered in the present study

Sl. No.	Type of lesions	No. of cases	Percentage
1	Cervicitis and erosion	194	83.91
2	(a) Non-specific cervicitis and erosion	182	78.69
	(b) Tubercular cervicitis	12	5.21
2	Cervical mucous polypi	19	8.26
3	Cervical fibroids	10	4.32
	(a) Polypi	6	2.61
	(b) Sessile	4	1.74
4	Carcinoma in situ	2	0.87
5	Squamous cell carcinoma	5	2.17
		230	100%

Non-specific chronic cervicitis and cervical erosion were the commonest lesions seen in 78.69% of the cases. Twelve cases of tubercular cervicitis were found, giving a fairly high incidence of 5.2%. Three of these had active tubercular focus elsewhere in the body. In three cases the cervix was hypertrophied, friable and bled on touch, with an ulcer on the ante-

liparous, and three out of these were of tubercular aetiology, which shows that tuberculosis of the genital tract is a definite factor contributing to sterility.

Two hundred and twenty were found to be parous women. No definite relationship between the gravidity and the incidence could be found.

It is apparent from the above table

TABLE II
Socio-economic status

No. of patients	Income per month
140	Less than Rs. 100/-
82	Rs. 100 to 200/-
8	Rs. 500/- and above

that most of the patients came from the low income group. The poor socio-economic condition may be responsible for the increased incidence due to ignorance, poor hygiene, poor obstetric care and lack of proper treatment after confinement.

Symptomatology

Symptomatology encountered in 230 cases is given in Table III.

Associated pelvic pathology was present in 42 cases. Pelvic inflammation was present in 26 cases, prolapse in 4 cases, fibroid uterus in 2 cases and retroverted and fixed uterus in 10 cases.

Silver probe test

This was done in 110 cases and was positive in 6 cases of tubercular cervicitis, one case of prolapse uterus with an ulcer of the cervix, eight cases of papillary erosion and one case of smooth erosion, but it was found to be negative in one case of carcinoma in situ and in one case of squamous cell carcinoma.

Bleeding on touch was noticed in the cervix of 66 cases — 12 cases of

TABLE III

Sl. No.	Symptoms	Present series		Dass & Bhargava series	Ross series
		No. of cases	Percentage	Percentage	Percentage
1	Leucorrhoea	176	76.5	67.8	80.0
2	Abdominal pain	90	39.1	43.2	59.0
3	Backache	72	31.3	18.6	59.0
4	Dyspareunia	55	23.9	9.0	5.1
5	Urinary symptoms	43	18.7	5.9	25.0
6	Blood-stained vaginal discharge	47	20.4	17.0	9.0
7	Sterility (primary & secondary)	48	20.08	11.9	7.0
8	Dysmenorrhoea	20	8.7	8.5	11.0
9	Menorrhagia	35	15.2	11.0	19.0
10	Dysfunctional uterine bleeding	39	16.9
11	Post-coital bleeding	20	8.7
12	Pruritus vulvae	26	11.3	6.8	12.0
13	Primary amenorrhoea	3	1.3
14	Secondary amenorrhoea	8	3.4

Gross Appearance of the Cervix

	No.
Smooth erosion	87 cases
Follicular erosion	59 cases
Cervical erosion with tear	14 cases
Papillary erosion	16 cases
Chronic cervicitis with Nabothian follicles	25 cases
Mucous polyp	19 cases
Cervical fibroids	10 cases

papillary erosion, 32 cases of follicular erosion, 6 cases of cervical ulcers, 10 cases of smooth erosion, 4 cases of polyp and 2 cases of ectropion.

Hanging drop preparation

This was positive for trichomonas

vaginalis in 14 cases giving an incidence of 6.08%.

Cervical smear examination

Cervical smears showed the presence of monilia albicans in 39 cases, giving an incidence of 17.4%. Gonococci could not be demonstrated in any case.

Cervical swab culture

(A) Aerobic culture done in 202 cases showed: -

Staphylococcus albus	57 cases
Staphylococcus aureus	27 cases
Streptococcus haemolyticus	3 cases
Streptococcus faecalis	4 cases
Streptococcus viridens	2 cases
E. Coli	28 cases
Pseudomonas pyocyanus	4 cases
B. proteus	2 cases
Aerobact. aerogenes	9 cases
Candida albicans	1 case
Culture sterile	75 cases
Anaerobic streptococci	71 cases
Anaerobic staphylococci	10 cases
Culture sterile	26 cases

(B) Anaerobic culture done in 100 cases showed:—

1. Chronic cervicitis	99
2. Cervical erosion	83
3. Squamous cell carcinoma	5
4. Cervical tuberculosis	12
5. Cervical polyp (Mucous) (2 cases showed squamous metaplasia).	19
6. Cervical fibroid	10
7. Carcinoma in situ	2

Schiller's iodine test

This was done in 110 cases and was found to be positive in 56 cases. Although it was positive in one case of carcinoma in situ and one case of squamous cell carcinoma, 48 cases of non-specific cervicitis and erosion and 6 cases of tuberculous cervicitis also gave positive results.

Histo-pathological changes

Histo-pathological examination was carried out in all the 230 cases. The various lesions encountered are given below:

Discussion

The incidence of benign lesions of the cervix, though it varies from clinic to clinic, still remains fairly high. The incidence in the present series has been found to be 18.4% among gynaecological patients. Our figures are similar to those reported by Ratnavati (17.3%). Some workers have reported a much higher incidence (Ross, 36%). Chakravarti

(26.1%). The incidence of erosion in pregnant women in our series, (63.4%), is slightly higher than the 50% incidence reported by Richard X-Sands. Non-specific chronic cervicitis and erosion have been found to be commonest of all benign lesions (78.69%). They are commonest between the age group of 20-39 years (77.2%). Our findings are similar to those reported by Chakravarti (82.3%) and Aptekar (81.09%).

Direct smear and cultural examination of the cervical discharge did not reveal gonococci in any of our cases.

TABLE IV
Showing detailed histologic study of non-specific cervicitis and cervical erosion in 182 cases.

		Surface Epithelial Changes					
		Sq. epith. hyperplasia	Basal cell hyperplasia	Sq. meta-plasia	Equivocal hyperplasia	Parakera-tosis	
		1	2	3	4	5	6
No. of cases		40	3	23	2	2	
Percentage		22.1%	1.6%	12.7%	1.1%	1.1%	

Glandular Changes				Stromal inflamm. infil.		
Polypoid gland hyperplasia	Cystic dil. or glands	Gland. epith. hyperplasia	Increased gland. Sec.	Mild	Moderate	Severe
7	8	9	10	11	12	13
45	37	4	19	41	97	44
19.3%	20.4%	2.2%	10.4%	22.6%	53.6%	23.8%

This probably may be due to general decline in venereal disease or due to the fact that most of these patients are being treated for all kinds of infections with sulpha drugs and penicillin frequently.

Trichomonas vaginalis was present in the cervical secretions of 6.08% of the cases in our series. Much higher incidence has been reported by Pandya (18%) and Amonkar (41%). The higher incidence in their cases appears to be due to the method of selection of cases for study, as they investigated only cases of excessive vaginal discharge irrespective of the cervical lesions being present or not. Monilial infection was found to be present in 14.3% of our cases. Varying figures regarding monilial infection have been reported by various workers—Amonkar (15.9%), Pandya (6%), Sathyavathi (2%), Rauramo (25%). The ratio of *trichomonas vaginalis* and fungal infections in our series was found to be 1:3.

Narvekar *et al* have reported a ratio of 4:7. Before the antibiotic era the incidence of *trichomonas vaginalis* infection was much higher than fungal infection in the ratio of 4:1 in western countries but now the ratio is almost reversed. Some workers from India still have reported higher figures of *trichomonas vaginalis* infection (Pandya 9:2, Amonkar, 2:2).

We have found a high incidence of tubercular cervicitis in this series (5.12%), much higher than reported from other parts of India (Gupta *et al*, 1%, Singh, 1.9%, Aptekar, 2%, Mitra, 1%, Bose, 0.2%). The higher incidence in our cases is probably due to greater prevalence of tuberculosis in Kanpur. In many of these cases the cervix is friable and bleeds on touch and so may mimic cancer cervix.

Table III shows the incidence of important symptoms in our series and compares them with those reported in the series of Ross (1950) and

Dass and Bhargava (1963). The incidence of sterility in our series is much higher than in the other two series. This may be partly due to the higher incidence of genital tuberculosis and other associated pelvic inflammations in our cases.

Histo-pathological examination of the biopsy material helped us to detect 2 cases of carcinoma in situ and 5 cases of carcinoma cervix and to confirm the diagnosis in 12 cases of tubercular cervicitis. Simple hyperplasia of the squamous epithelium was found in 20.1% of our cases. Man Mohan Singh has reported 4.7% incidence of hyperplasia of the surface epithelium. Basal cell hyperplasia was found in 1.6% of our cases. Wesley has reported basal cell hyperplasia in 2.6% of the 800 cervixes removed at abdominal hysterectomy. Galvin and Te Linde (1949) believe that carcinoma in situ begins in the basal layers of epithelium. Squamous metaplasia was present in 12.7% cases of chronic non-specific cervicitis and erosion and 10.5% cases of cervical polyp. Varying incidence of squamous metaplasia associated with chronic inflammatory lesions of the cervix has been reported by various workers (Wesley, 9.7%; Auerbach, 70%; Carmichael and Jeafferson, 41%; Schmitz, 19%). Varying figures in cases of cervical polyp have also been reported in literature (Fluehman 29%, Israel 8.5%, Farrer *et al*, 12.2%). Aurbach has suggested that chronic inflammation and irritation of the cervix play an important role in the development of squamous metaplasia. Glandular hyperplasia was found in 21.5% of our cases. Wesley has found it only

in 2.2% and Ratnavati has reported it in 12.2% of her cases.

Summary

Incidence of benign lesions of the cervix in patients attending gynaecological clinic was found to be 18.4%. The incidence rises markedly during pregnancy. It was found in 63.4% of antenatal cases. The lesions were found to be commonest between 20 to 30 years of age and 92.3% of the cases were multiparous. The common presenting symptoms in these cases were leucorrhoea (76.5%) abdominal pain (39.1%), backache (31.3%) and dyspareunia (23.9%).

Histo-pathological examination in all the 230 cases revealed 182 cases of non-specific cervicitis and erosion, 12 of tubercular cervicitis, 19 of cervical mucous polyp, 10 of fibroid, 2 of carcinoma in situ and 5 of squamous cell carcinoma. Papillary type of erosion was present in 16 cases and five of these were found to be of tubercular origin.

The study has revealed certain important points. (a) Cases that clinically look benign may turn out to be tubercular or malignant on histo-pathological examination, (b) cases suggestive of malignancy on clinical examination may turn out to be benign. Thus no hasty and drastic treatment should be carried out unless the cases are proved to be malignant on histo-pathological study. Trichomonas vaginalis infection was found in 6.08% of the cases, while monilia albicans was present in 14.3% of cases.

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