

Role of Cervical Cytology in Gynaecological Practice

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SUMMARY

Exfoliative cytopathology is a potent tool for the early detection and thereby eradication of cervical cancer and reducing mortality for many others. Besides, it has a vital role to play in diagnosis and therapy of infections specially trichomoniasis for which it gives a permanent record. The simplicity and rapidity of the technique is the greatest advantage for screening a wider group of population and thus guide us toward further diagnostic procedures.

INTRODUCTION

Exfoliative cytology was successfully introduced by Papanicolaou and Traut in 1943. Since then the clinical utilization is rapidly expanding due to its immense value to the patients. It gives diagnosis of disease at stages earlier than even possible. It indicates the need for further essential diagnostic procedures and then evaluates their accuracy. Prompt treatment and follow up response has been rendered possible with this simple and rapid aid. Clinical cytopathology became available to our Department in U.T.H., Lusaka from 1977. The aim of the study is to evaluate the rôle of cervical cytology in early detection of abnormal smears and also to isolate the various organisms responsible for vaginal discharge.

MATERIAL & METHOD

A total of 7170 pap smears were obtained from 1977 to 1980, from the patients attending gynaecological and family planning clinics of University Teaching Hospital as well as from the peripheral clinics in Lusaka, Zambia.

Many cases of vaginal discharge don't come to our attention as they go directly to the S.T.D. clinic, either as patients or contacts of men already attending the S.T.D. clinic. The cervical cytology was done in patients ranging in age group from 20–65 years. Most of the patients were married and their parity varied from 0 to 14. In addition to African race, Caucasians and Asians also constituted a part of the present study.

A detailed medical and obstetrical history with complete physical examination was recorded in all

the 7170 patients. For taking a pap smear, a cervical scrape was taken with Ayre's spatula, immediately wet fixed in ether and alcohol, stained by papanicolaou's method. The abnormal pap smears were graded according to modified W.H.O. classification by SOOT and DROESE. The present study was limited to detection of infection which included protozoal, fungal, helminthic, and diagnosis of precancerous states of the lower genital tract. Although it is possible to identify Herpes Simplex virus by smears but we didn't include it in our series. Neither have we included the aspect of hormonal evaluation in the current analysis.

TABLE I

Indications for Pap Smear (7170 Cases)

1.	Vaginal Discharge	2,300
2.	Cervical Erosion	1,932
3.	Before pill, and follow up	1,218
4.	I.U.C.D. users	803
5.	Post-coital bleeding	350
6.	Routine Check up	200
7.	Un-healthy cervix	120
8.	Vulval itch	100
9.	Post-menopausal bleeding	70
10.	Pre-operative screening	62
11.	Post-operative-follow-up	15

TABLE II

Age Distribution (in Years)

	20–30	31–40	41–50	51–65	Unknown
Number	3881	1849	946	241	253
Percentage	54	26	13.2	3.3	3.5

TABLE III

Parity Distribution

	P=0	P1–4	P5–14	Unknown
Number	1074	3772	2024	300
Percentage	15	53	28	4

TABLE IV
Racial Distribution

	African	Caucasian	Asian
Number	5933	839	398
Percentage	82.7	11.7	5.6

TABLE V

Total Number	Trichomoniasis	Candidiasis	Schisto-Somiasis
717	697	213	49
Percentage	9.7	2.97	0.67

TABLE VI
Abnormal Pap Smears

Total Number	Grade III	Grade IV	Grade V
7170	88	43	92
Percentage	1.2	0.6	1.3

OBSERVATION & DISCUSSION

In the present study significant number of patients (54%) belonged to younger age group (Table II). Although 53% of cases were of parity 1 to 4, yet nulliparous women (15%) constituted a considerable part of the study (Table III). Majority of our patients (87.2%) were Africans (Table IV). Trichomoniasis was detected in 9.7% of cases (Table V) attending Gynae Clinic whereas from STD Clinic, UTH, Lusaka, a very high incidence (52.2%) has been reported by Ratnam (1980). Osaba (1974) reported an incidence of 15–20% in Nigerian women in Africa. From a cancer survey of 38,000 women in U.S.A., Ipsen and Feigl (1970) calculated that the risk of infestation with trichomoniasis among negroes was three times higher than among those of caucasian origin.

Relatively lower incidence in our series can be explained probably due to wider screening of patients in Gynae Clinic. However the efficiency of pap smear in diagnosis of trichomonal infection has been proved by Thin et al (1975), to be equally reliable to fresh wet smear and culture methods. Genital candidiasis was noted in 2.9% of cases attending Gynae Clinic (Table V). While in STD Clinic, UTH, the rate of 10.6% (Ratnam, 1980). Caterall (1970) quoted incidence of 25% from V.D. Clinic patients. The low incidence in our series could be explained due to wide screening of patients and partly due to unreliability of pap smear in detection of candidiasis as reported by Thin et al (1975). Cassie and Stevenson (1973) suggested the use of Sabourand's medium

and results are far superior as compared to that of cervical smear.

Goldacre (1979) reported an incidence of 21% for candidiasis in family planning clinic where trichomoniasis was noted in 1% of cases only. He also observed candidiasis to be more frequent in younger patients (25 years). In our series prevalence of trichomoniasis was more in all the age groups as compared to candidiasis and the maximum incidence of 62.7% was found in the youngest age group 20–30 (Table VII). Trichomonal infection was more frequent in IUCD and pill users as compared to candidal infection (Table VIII). The relationship between vaginal candidiasis and use of contraceptive pills has been controversial. Association has been suggested by Walsh (1968) but; not by Goldacre (1979). High incidence of these two STD (Trichomoniasis and candidiasis) may be explained on account of doing away with the use of condoms and increase in sexual contacts. Fear of pregnancy disappears with the use of IUCD and pills, as suggested by Walsh (1968).

Detection of Bilharziasis made in 49 cases (0.67%) of our series (Table V) was of considerable clinical importance. In the present study carcinoma-in-situ (grade IV) was detected in 43 cases and invasive carcinoma (grade V) in 92 cases (Table VI). Dysplasia (grade III) was diagnosed in 1.2% of cases. Between the negative and positive extremes in the diagnostic spectrum, there are always other cases which are neither clearly free of evidence of cancer

TABLE VII
Prevalence of Trichomoniasis and Candidiasis in Different Age Groups

Age in Years	Numbers (697)	Percentage	Number (213)	Percentage
20–30	436	62.7	108	50.8
31–40	140	20.0	60	28.1
41–50	70	10.0	21	9.8
51–65	21	3.0	7	3.3
Unknown	30	4.3	17	9.0

TABLE VIII
Prevalence of Trichomoniasis and Candidiasis with I.U.C.D., Pill

Trichomoniasis	Alone	IUCD	Pill	Total
Number	481	153	63	697
Percentage	69	22	9	
Candidiasis				
Number	148	53	12	213
Percentage	69.4	25	5.6	

nor equivocally malignant. These cases are inconclusive and definitely need further study of the patient.

Prevalence of trichomoniasis in grade III, IV and V pap smears in our series was found only in 13% of cases (Table IX). No relationship between trichomoniasis predisposing to malignancy of cervix existed as put forth by Carneri et al (1970).

TABLE IX

Prevalence of Trichomoniasis in Grade III, IV, V Pap Smears

	Grades III, IV, V	Trichomoniasis
Number	223	29
Percentage		13

SUMMARY

This paper presents an analysis of 7170 pap smear results, carried out in the Department of Obstetrics and Gynaecology, University Teaching Hospital, Lusaka for a period of four years from 1977 to 1980.

In addition to the detection of grade III (1.2%), grade IV (0.6%) and grade V (1.3%) pap smears, Trichomoniasis and Candidiasis were also detected in 9.7% and 2.97% of cases respectively. Coincidence of Bilharziasis was observed in 49 cases (0.67%). More frequent use of this simple and invaluable aid is emphasized.

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