

EVALUATION OF CYTOLOGICAL AND HISTOLOGICAL EXAMINATIONS IN PRECANCEROUS AND CANCEROUS LESIONS AMONGST GYNAECOLOGICAL DISEASES

By

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SUMMARY

Two hundred fifty patients belonging to all age group having history of abnormal bleeding per vaginum and other gynaecological complaints were studied for early diagnosis of precancerous and cancerous lesions of genital tract. In cervical lesions amongst precancerous lesions there was 74.28% correlation between cytology and Biopsy in inflammatory lesions, 90.9% correlation in moderate dysplasia, 80% in severe dysplasia and 80.9% correlation in invasive carcinoma.

In cases of abnormal uterine bleeding having no cervical lesion 80% correlation was found in aspiration cytology and endometrial biopsy in different precancerous lesions. In malignant lesion there was 100% accuracy by aspiration cytology where as only 80% accuracy by endometrial biopsy.

Introduction

The value and accuracy of vaginal and cervical smear in diagnosis of cervical carcinoma are well known but they have low accuracy in diagnosis of endometrial cancer. There is a recent rise in precancerous and cancerous lesions amongst gynaecological diseases so there is a necessity of early detection of both early and asymptomatic forms. Thus vaginal, cervical and endometrial aspirations have been adopted as cytological procedures in present study and endometrial and cervical biopsy as histological procedures. In suspected cases hysterectomy has been performed after

confirmation of diagnosis by cytology and biopsy.

Material and Method

The present study was carried out in the Departments of Obstetrics and Gynaecology and of Pathology, at M.L.B. Medical College, Jhansi. Two hundred fifty patients were studied from June 1985 to March 1986. They were subjected to a thorough history taking, general, physical and local examination and then to vaginal, cervical and endometrial aspiration cytology, endometrial and cervical biopsies.

Observations

Cervical lesions: In this group of 150 patients the age ranged between 25-70 years, the maximum number being in the age group of 25-30 years (28.66%). 40%

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cases were with parity 3. 85.33% cases were in perimenopausal group and 14.66% in post-menopausal group. In cervical lesions maximum number of cases were with erosion (75.35%), 15.33% with cervicitis and 9.33% with growths including polyps, cauliflower like growth, induration and irregular cervix.

On cytological examination 14% had normal smear, 23.33% with inflammatory cells, 12.7% with erosion, and 37.99% with dysplasia 20% mild, 14.66%, moderate and 3.33% severe. Carcinoma in situ was seen in 2.66% cases and invasive carcinoma in 6.00% cases. Cervical biopsy was done in 70 cases with moderate to severe dysplasia, carcinoma in situ and invasive carcinoma. In inflammatory smears there was 74.28% correlation, in moderate dysplasia 90.9% correlation, in severe dysplasia 80% correlation in carcinoma in situ 75% correlation and in invasive carcinoma 88.9% correlation between cytology and biopsy (Table I).

Hysterectomy was done in 50 cases of moderate to severe dysplasia, invasive carcinoma and chronic cervicitis who had completed their family and had other bleeding disorders. Cervix was normal in 10%, showed chronic cervicitis in 24%, mild dysplasia in 6%, moderate dysplasia in 30% severe dysplasia in 12%, carcinoma in situ in 8% and carcinoma in

2%. In moderate dysplasia there was 81.8% correlation between cytology and hysterectomy findings and 90% between biopsy and hysterectomy. 100% correlation was seen between cytology and hysterectomy findings in carcinoma in situ and 75% correlation between biopsy and hysterectomy.

Abnormal uterine haemorrhage: We studied 100 cases to detect precancerous and cancerous lesions. Uterine carcinoma was diagnosed by aspiration cytology and endometrial biopsy, followed by hysterectomy. The patients were in the age group of 25-70 years, maximum number i.e. 30% being in the age group of 41-45 years. 26% cases were with parity 3 and majority were multiparous. 70% cases were in pre-menopausal group and 30% in post-menopausal group. 70% of the patients complained of abnormal bleeding viz. menorrhagia, metrorrhagia, polymenorrhagia and post-menopausal bleeding. 18% cases had prolapse, 4% had blood stained discharge and 8% had lump in abdomen (Table II). On aspiration cytology 75% cases showed normal exfoliation. Benign hyperplasia was present in 2%, adenomatous hyperplasia in 3% and atypical hyperplasia in 3%. Endometrial biopsy was done in similar group and 10% hyperplasia was reported (3% benign, 4% adenomatous and 3% atypical). Therefore there exists 80%

TABLE I

Percentage Correlation Between Cytology and Histology Findings in Cervical Erosion

S. No.	Diagnosis	No. of cases of cytology	No. of cases of cervical biopsy	Percentage correlation
1.	Inflammatory	35	26	74.23
2.	Moderate dysplasia	22	20	90.9
3.	Severe dysplasia	5	4	80.0
4.	Carcinoma in situ	4	3	75.0
5.	Invasive carcinoma	9	6	88.0

TABLE II

Percentage Correlation Between the Findings of Aspiration Cytology and Endometrial Biopsy

S. No.	Diagnosis	No. of cases of aspiration cytology	No. of cases of endometrial biopsy	Percentage correlation
1.	Normal smear	73	79	92.4
2.	Benign hyperplasia	2	3	66.6
3.	Adenomatous hyperplasia	3	4	75.0
4.	Atypical hyperplasia	3	3	100.0
5.	Malignancy	5	4	80.0

correlation between the findings of aspiration cytology and endometrial biopsy for diagnosing precancerous lesions.

In the present study, 5 cases were diagnosed to be malignant by aspiration cytology, 4 by endometrial biopsy and 5 by hysterectomy. Thus biopsy showed 80% accuracy whereas aspiration cytology showed 100% accuracy in diagnosing malignancy. Cytology was 100% accurate in diagnosing carcinoma in situ and endometrial aspiration cytology was 100% reliable diagnosing endometrial carcinoma.

Discussion

Cervical lesion: We had patients in age group of 25-70 years. This study corresponds to Wahi *et al* (1969). Hameed *et al* (1976), Ahuja and Reddy (1976). On distribution of cases according to parity maximum number of cases 40% were with parity 3, 21.66% with parity 4. This corresponds to the study of Aekat *et al* (1974), Ahuja and Reddy (1976). On cytological examination by vaginal pool smear and cervical cytology, 14% had a normal smear, 23.33% with inflammatory smear and 12.7% with erosion, mild dysplasia was seen in 20% cases, moderate in 14.66% cases, severe in 3.33%. Thus dysplasia was present in 31.99%, carci-

noma in situ in 2.66% and invasive carcinoma in 6.0%. Bhaskaran *et al* (1978) reported 20% inflammatory smear, mild dysplasia in 16.6%, moderate in 6% and severe in 5.9%, carcinoma in situ in 3.6% and malignancy in 11.6%. Total dysplasia was in 30.2% which corresponds to our study.

Abnormal uterine haemorrhage: Biopsy showed 80% accuracy whereas aspiration cytology showed 100% accuracy in diagnosing malignancy. Papanicolaou (1946) showed diagnostic accuracy of 92.31% in malignancy by aspiration cytology. Hecht (1956) has accuracy rates of 100%. Others who have similar accuracy rates are Cohen *et al* (1974), 95%, Anderson *et al* (1976), 90-100% and Ambiye *et al* (1981), 100%. Diagnostic accuracy rate by endometrial biopsy in Wahi *et al* (1954) series is as high as 91%.

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