

ENHANCEMENT OF COLPOSCOPIC IMAGE WITH SALICYLIC ALCOHOL AND 70% ALCOHOL

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SUMMARY

Acetic acid (3%) is conventionally used for application to the cervix during colposcopy. We used salicylic alcohol and 70% alcohol successfully to enhance the colposcopic image after application of acetic acid, thereby improving the accuracy of colposcopic diagnosis.

INTRODUCTION

Acetic acid (2 to 3%) is conventionally applied to the uterine cervix during colposcopy. It precipitates protein and helps in removal of cervical mucus. It also penetrates between cervical epithelial cells in cases of intraepithelial neoplasia and makes the epithelium white on colposcopic visualisation. But it does not help in the correct diagnosis of all cases as is evident from the fact that there is sometimes disparity in the diagnosis of exfoliative cytology, colposcopy and biopsy. We evaluated salicylic alcohol (Hinselmann, 1925) and 70% alcohol for enhancement of the colposcopic image in 100 patients and found satisfying results.

MATERIAL AND METHODS

Between October 1988 and March 1991, we

evaluated 100 cases colposcopically at K.E.M. Hospital, Bombay. Of these 100 cases, 50 were normal and the other 50 had various abnormalities as assessed by exfoliative cytology. Colposcopy was done using 3% acetic acid for application to the cervix and the image was studied. Then acetic acid was applied to the cervix again, followed by salicylic alcohol (0.5 g of salicylic acid in 100 ml of 70% alcohol) and the colposcopic image was compared to that obtained by application of acetic acid alone. Colposcopy was repeated on these patients one week later, applying acetic acid initially, followed by 70% alcohol. The images obtained after application of acetic acid alone and acetic acid followed by 70% alcohol were compared. The points noted were color and clarity of the squamous epithelium, the color and clarity of the columnar epithelium, and the details of the transformation zone, normal or abnormal.

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Colposcopy was done in all cases using direct light from the light source as well as light passed through the red and green filters. Schiller's iodine was applied to all the cervixes at the end and colposcopy was repeated. Cervical punch biopsies were obtained as appropriate to confirm the diagnosis suggested by exfoliative cytology and colposcopy.

RESULTS

The results of colposcopy in these patients are

lature were seen better in only 12 (32.43%) cases, of which 7 were CIN 1, 3 were CIN 2 and 2 were CIN 3. There was no change in the remaining cases, and a worse image was not obtained in any case. The appearance of condyloma accuminata was superior in 11 (84.61%) cases, while in 2 there was no change in 2 (15.39%) cases.

The diagnoses were confirmed in all cases of CIN 2 and 3, and condyloma accuminata with histopathological examination of cervical punch

RESULTS OF COLPOSCOPY

Change in the colposcopic image

Diagnosis	Salicylic alcohol			70% alcohol		
	Better	No Change	Worse	Better	No Change	Worse
Normal	29	21	0	27	23	0
Cervical intraepithelial neoplasia	12	25	0	14	27	0
Condyloma accuminata	11	2	0	11	2	0

shown in the following table :

The colposcopic image after application of 3% acetic acid was enhanced with application of salicylic alcohol after acetic acid. The metaplastic squamous epithelium stained white-opaque, while the endocervical columnar epithelium stained darker than before. Such enhancement of the image was seen in 29 (58%) of normal cases, while in 21 (42%) there was no change. The image did not deteriorate in any case with the application of salicylic alcohol. The image was enhanced in cases of cervical intraepithelial neoplasia to a lesser extent. Acetowhite epithelium did not become more white in any case. Out of 37 cases of cervical intraepithelial neoplasia (CIN), 18 were CIN 1, 13 were CIN 2 and 6 were CIN 3. Punctuation, mosaic and abnormal vascu-

biopsies obtained under colposcopic control.

DISCUSSION

Salicylic alcohol improved the colposcopic image obtained by 3% acetic acid in 58% of normal cases and 84.61% cases of condyloma accuminata, but only in 32.43% cases of CIN. Thus it was useful in identification of the normal cases and those of condyloma accuminata, but not so much of CIN. The 70% alcohol used dehydrates cervical epithelial cells and thereby improves the colposcopic image. It would be tempting to speculate that condylomatous lesions bind to salicylic acid and thus the image improved in such a large percentage of cases of condyloma accuminata. However identical results were obtained with the use of 70% alcohol

alone, and hence salicylic acid does not probably play a significant role in the enhancement of the image. The differences seen in the results of use of salicylic alcohol and 70% alcohol were not statistically significant. We currently use 70% alcohol rather than salicylic alcohol after application of acetic acid during colposcopy.

CONCLUSION

The colposcopic image after application of 3% acetic acid is enhanced by application of 70% alcohol in normal cases and those with condyloma accuminata. The enhancement is much less in cases of CIN. Use of salicylic alcohol instead of

70% alcohol does not improve the results. Use of 70% alcohol after application of 3% acetic acid is recommended in all cases of colposcopy for improvement of diagnostic accuracy.

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English text and Hindi translation

SUMMARY

Two hundred and sixty-seven patients above 25 years with a mean of 42 years were analysed for cytological and colposcopic changes. Cervical intraepithelial neoplasia (CIN) was found in 24.3%, genital herpes in 25.2% and chronic infection in 11.6%. Authors feel that routine Pap smears of all women above 25 years attending gynaecology in the institution should be carried out to detect cervical changes in the early stages.

MATERIAL AND METHODS

The present study was conducted prospectively including all women above 25 years of age who attended the out-patient department of Obstetrics and Gynaecology in Jawahar Lal Institute of Postgraduate Medical Education and Research, Pondicherry, from April 1989 to December 1991. A detailed history, result of physical examination and laboratory investigations were recorded. Pap smears were taken from the cervix in all the cases. Biopsy was taken wherever indicated. In all the cases of CIN, colposcopy, endometrial biopsy, and immunohistochemistry were taken. The data were collected & analysed.

INTRODUCTION

In our country, average life expectancy at birth was about 22.9 years in 1950, 32.1 years in 1970 and 54.4 years in 1980, now it stands at 58 years (Health Statistics of India, 1980, 1987). Due to the increase in life expectancy, more women in the family, the number of women attending the out-patient department has increased. Many of the women, of the upper class and middle class, are likely to occur in other people. Hence this study was taken up to study the gynaecological disease pattern in general population above 25 years of age attending our Gynaecological OPD.

RESULTS

Out of the total of 2677 patients who

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