

# ASCUS in Pap Smears – A Preliminary Report on 106 Cases

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## Summary

Follow-up smears from 106 women who had “atypical cells of uncertain significance” in their routine Pap Smears, showed that in 37.7% of women, these cells antedated HPV infection and serious intraepithelial lesions, indicating the progressive potential of some of these atypical changes.

*Key Words:* ASCUS, Follow-up, Progressive potential

## Introduction

Atypical Squamous Cells of Uncertain Significance, ASCUS, a category introduced by the Bethesda System of reporting on cervical and vaginal cytology, have fairly well defined cytological criteria for identification but pose a problem to the clinician who has to make decisions regarding subsequent management of a woman whose smear contains these cells. Cytologically the term is restricted to squamous cell changes more severe than those seen in reactive conditions but insufficient for a diagnosis of squamous intraepithelial lesion (dysplasia, CIN). All women with this atypia in their smears have to be followed up to determine the outcome and management. This is a preliminary report on the follow-up of 106 women whose first routine smears showed ASCUS.

## Materials and Methods

Between 1991 - 1994, 35,039 cervico-vaginal smears were processed in the Division of Cytology, Institute for Medical Research. 1,681 smears (4.7%) were reported as containing ASCUS. Repeat smears were done every six months. If the second smear showed persistent atypia, the patient was subjected to colposcopy and further smears. In selected cases, directed biopsies were done. All repeat smears were compared with the original smears during cytological

reassessment. When the repeat smears showed more severe abnormalities, the first smears were re-screened for possible missed diagnoses. No errors were detected in the original interpretations. Data from 106 patients observed for 1 - 4 years, are available and presented here.

## Results

In 65 women (62.3%) the atypia regressed totally within 12 - 18 months. In the remaining 41 (37.7%) follow-up showed varying grades of progression as shown in the accompanying Table (Table I).

## Discussion

ASCUS, as defined by the Bethesda System, show morphological changes more severe than those attributed to reactive cellular response but which fall short of the diagnosis of squamous intraepithelial lesion (SIL)<sup>1</sup>. Since the changes, characteristics of ASCUS may reflect an exaggerated benign process or a potentially malignant lesion which cannot be distinguished by morphology alone, appropriate management can be difficult. Ascertaining the causes of squamous “atypia” from cytological examination is usually a subjective assessment and there are several possibilities, namely, inflammation, regeneration, repair, therapeutic procedures, certain

Table I

No. of cases	Repeat Pap Smear report	Colposcopy findings	Histopathology report	Period from time of original diagnosis of ASCUS
4	ASCUS	No abnormality	-	12 - 24 months
27	CIN I 18 with HPV changes	CIN I 18 - with flat condyloma 3 - with spiked condyloma	-	6 - 24 months
9	CIN II	CIN I to II	CIN II 2 with HPV	12 - 36 months
1	CIN III	CIN III	CIN III	18 months

deficiency states (eg. folic acid) and neoplasia. While the protocol for the management of women with definite intraepithelial lesions is fairly well established, that for ASCUS is somewhat controversial. Some clinicians tend to view these with little concern while some recommend colposcopy for all women with ASCUS<sup>2</sup>.

This study indicates that in over 37% of women, the appearance of ASCUS antedated more severe lesions which became obvious in the follow-up period. Our findings, similar to those in other reports<sup>3,4,5</sup>, show that in some women, ASCUS have progressive potential. Lesions that exfoliate atypical squamous cells appear to be a heterogenous group of varying etiology, including non-specific inflammations, Human Papilloma Virus infections and true intraepithelial neoplasia. The majority however have no neoplastic association. Nevertheless, high grade lesions have been picked up in the follow-up of women with ASCUS. From correlative histopathologic studies on patients with ASCUS, Auger *et al*<sup>6</sup> showed that these patients on follow-up exhibited a wide spectrum of findings ranging from no pathologic abnormalities to Cervical Intraepithelial Neoplasia (CIN) and even, rarely, Cervical Cancer. Yang and Zachariah<sup>7</sup> after evaluating smears with ASCUS for their predictive significance, concluded that they serve as a good marker of underlying CIN in a number of cases \_\_\_ of the 132 cases followed up with biopsies and repeat smears,

66.7% showed CIN, while 9.8% continued to have ASCUS. Is there justification for colposcopic review of all women with these abnormal cells? Slawson *et al* in a study<sup>7</sup> relevant to this question advise follow-up smear combined with an acetic acid wash prior to naked-eye examination of the cervix for clinicians not opting for colposcopy for all women with ASCUS. This will ensure that high grade lesions are not missed and selection for colposcopy could then be limited to those who have an abnormal smear or acetic-acid wash.

### Conclusion

The results of this preliminary study show that ASCUS can antedate more serious intraepithelial lesions with malignant potential. Therefore there is a need for careful cytological evaluation of smears to pick up these changes and for a definite protocol for the management of women with an initial diagnosis of ASCUS.

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