

Catching properties of brushes used in ThinPrep[®]-liquid-based cytology

Hazem T. Jafer, Mathilde E. Boon and Elisabeth Ouwerkerk-Noordam
Leiden Cytology and Pathology Laboratory, Leiden, The Netherlands

OBJECTIVE

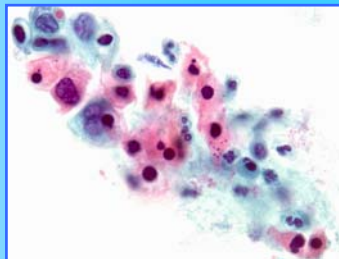
In our laboratory, the Leiden Cytology and Pathology Laboratory, we have processed over 80,000 cervical samples for liquid-based cytology. We observed that in the Cervex-Brush[®] Combi cell material can remain in the bristles and accordingly these caught cells do not end up in the ThinPrep[®] slide.

MATERIALS & METHODS

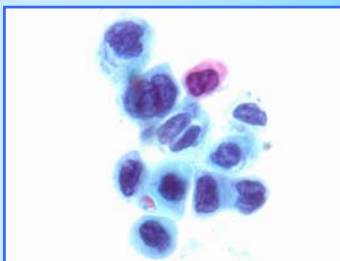
We compared 10 cases without the brush left in the vial (C1) with 10 cases in which the brush was left in the vial by the clinician (C2). Moreover, after making a ThinPrep slide of the cases in the last group, we used a paint shaker to remove as many cells as possible remaining in the brush. Then we made a ThinPrep slide from the same 10 cases (C3). In all slides, the squamous and endocervical cells were quantified according to the Cytoc protocol. In addition from 5 cases, 3 CIN III cases, 1 squamous cell carcinoma and 1 adenocarcinoma case, the cells remaining in the brush were removed with squeezers. After suspending these cells in fixative a ThinPrep slide was made.



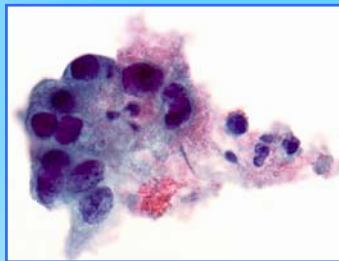
Cell material remaining in the brush after making the ThinPrep slides.



ThinPrep slide: Squamous carcinoma cells remaining in the brush.



ThinPrep slide: CIN III cells remaining in the brush.



ThinPrep slide: Adenocarcinoma cells remaining in the brush.

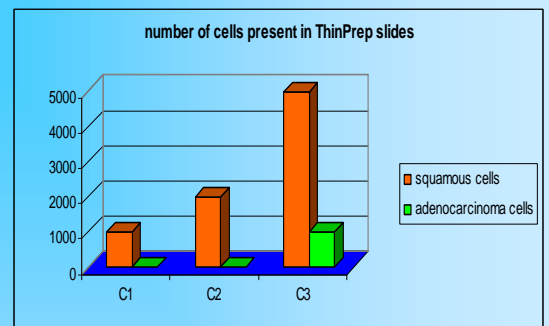


Figure 1.
C1: 10 cases without brush
C2: 10 cases with brush
C3: same 10 cases as C2, with shaking

RESULTS

Results of the mean counts of squamous and endocervical cells are presented in Figure 1. In C1 and C2 endocervical cells are sparse. In C3 (after shaking) both the number of squamous and endocervical cells are increased. The ThinPrep slides made from the remaining cells, removed with squeezers, contained a large number of malignant cells.

CONCLUSION

**Important diagnostic cell material remains caught in the Cervex-Brush Combi.
It is to be advised that the clinician leaves the brush in the vial and to use a paint shaker in
the laboratory in order to enhance the ThinPrep slides.**