

Improved cellularity of lubricant-contaminated ThinPrep Cervical Samples after Distilled Water Wash

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INTRODUCTION

By microscopic examination, some Pap smears are obviously contaminated with water-soluble lubricant, commonly due to the use of Aquagel by smear takers. Occasionally, the lubricant can significantly obscure the view of the smear and lead to an unsatisfactory report(1). The objective of this technical report is to quantify the effect of a distilled water wash on the cellularity of water soluble lubricant-contaminated ThinPrep Cervical samples.

METHODOLOGY

- 1.) Eleven ThinPrep cervical samples were selected because on microscopic examination the slide appeared to be unsatisfactory due to scanty squamous cells .
- 2.) These samples were reprocessed by centrifuging for 5 minutes at 1000 rpm then discarding the supernatant and resuspending in distilled water.
- 3.) After vortexing, the samples were centrifuged again, reconstituted with PreservCyt and reprocessed using a T5000 processor.
- 4.) The original and reprocessed slides were compared descriptively and by a cell counting method. Squamous cell nuclei were counted in the central part (x200) of every 10th low power (x100) field.



Figure 1: shows the Thinprep vial with excessive lubricant.

FINDINGS

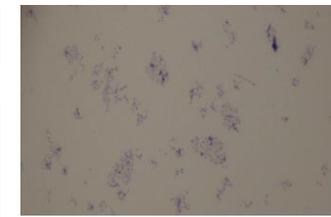


Figure 2 &3: show the slide before and after treatment with Distilled water wash due to excessive lubricant.

Subjectively there appeared to be a reduction in the amount of lubricant in all the washed slides. Squamous cells appeared more numerous and the cell counts confirmed this with more squamous nuclei counted in the washed slides in every case. The greatest increase was by a factor of x3.8 and the least x1.1. The difference in counts between the unwashed and washed slides achieved statistical significance ($P=0.0025$). Eight of the 11 cases were reinterpreted as satisfactory and negative and 3 cases remained unsatisfactory. Where the cell count increased by more than x1.5 after washing, these samples were all reinterpreted as satisfactory.

CONCLUSION

In conclusion, we have demonstrated that the number of squamous cells is significantly increased after a distilled water wash when ThinPrep samples are overtly contaminated with water-soluble lubricant.

REFERENCE

(1) Kalinicheva, T., Frisch, N., Giordadze, T., Madan, S., Shidham, A., Bhalla, A., Mejias-Badillo, L., Tranchida, P., Bandyopadhyay, S., Dhillon, I. and Shidham, V. (2015). Etiologic factors related to unsatisfactory ThinPrep®cervical cytology: Evaluation and potential solutions to improve. *CytoJournal*, 12(1), p.21.

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