



## REHYDRATION OF AIR-DRIED CERVICAL SMEARS: AN ALTERNATIVE TO ROUTINE WET FIXATION

<http://www.firstlight.cn> 2006-12-18

To prepare Pap smears, the routine practice is to fix the slides immediately in 95% ethanol. This study was performed to evaluate the possibility of routine use of alternative method of air-drying and rehydration prior to alcohol fixation instead of conventional method. Paired cervical smears with at least low cellularity were collected from 117 women who participated in the study. One set was labeled WF (wet fixed or fixed immediately in 95% ethanol) and the other one ARF (air-dried, rehydrated and fixed). The latter further split into 3 subgroups based on the duration of air-drying. The staining quality of the slides was assessed with respect to chromatin, nuclear and cytoplasmic borders, cytolysis, cellularity, cytoplasmic staining, and red blood cells lysis. Then they were graded blindly. The results were analyzed by Chi square test to compare the defined parameters between the 2 groups and also the 3 subgroups. ARF slides were significantly better with regard to clearance of background due to the lysis of red blood cells (P value, 0.000,  $\chi^2$  test; kappa, -0.27). No statistically significant differences were noted between two groups in terms of other cytologic features. Cytologic features of ARF slides were statistically identical to WF smears. However, red blood cells lysis rendered clearer background in ARF slides. Air-drying and rehydration of slides is a superior method for heavily blood stained smears and can be used at least with identical quality for routine practice.

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