CytoPath® Easy processing method validation through cervical self-sampling

S. Fernandes, C. Martins, R.A. Silva
Centro de Investigação em Saúde e Ambiente da Escola Superior de Saúde do Instituto Politécnico do Porto (CISA-ESSIP.PORTO), Rua Dr. António Bernardino de Almeida 400, 4200-072 Porto, Portugal

Background
Liquid-based cytology is mostly used for the identification of pre-neoplastic and neoplastic cells of cérvix uteri, and many manual and automatic methodologies are available on the market. This study aims to validate a new manual liquid-based processing method - the *CytoPath® Easy Kit*, for its routine use in some cytology laboratories.
Methods
For this purpose, 45 cervical samples, obtained by self-sampling of women aged 18–58 years old were used: 30 were collected and processed with the *CytoPath® Easy Kit* and 15 samples were collected and processed by *Thinprep®*, as a control. Parameters evaluated were cellularity, thickness and cellular overlap of the imprint, undesirable background/debris, morphological preservation and staining properties of the sample. The presence and quantity of metaplastic and/or endocervical cells of the transformation zone was also compared between methods.
Results
The results obtained show that *CytoPath® Easy Kit* allows the representation of the sample with a very satisfactory cellularity, in a thin layer of cells and without excessive overlap, presenting a reasonably clean background. Statistically, both methods present similar results ($P > 0.9999$), both globally and for each of the parameters evaluated individually. These results allow to validate the use of this new method in the cytological routine.
Conclusions
This Kit proves to be very useful, allowing the laboratory to screen cervical cytology samples, without the need for large investments and with reliable microscopic results. This has particular interest for laboratories of poor or developing countries as well for services processing small number of samples.
Keywords: cervix uteri, cytology, Methods, liquid-based processing.