

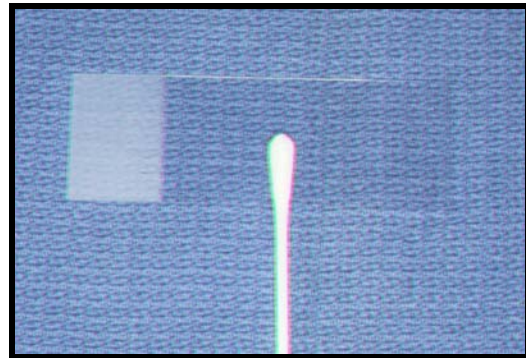
## **ENDOMETRIAL CYTOLOGY**

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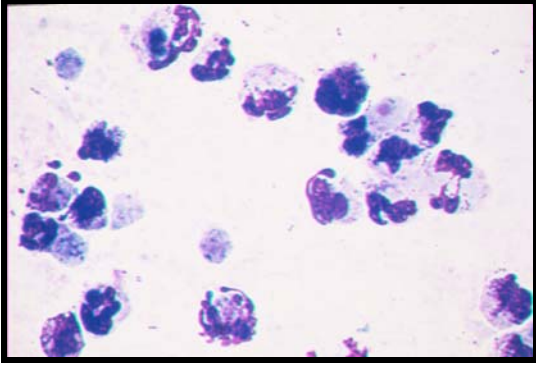
Cytologic evaluation of the uterus involves the collection and interpretation of cells lining the uterus (endometrium) and within the uterine lumen. Cytology is used in conjunction with culture and biopsy in the diagnosis of endometritis. Advantages of endometrial cytology for diagnosis of endometritis include the ease of sample collection and rapid availability of results. Endometrial cytology is one of the least expensive and most useful techniques routinely used to detect the presence of endometritis.

A guarded uterine culture instrument is used to collect a swab of the uterine lumen and endometrium as previously described. The swab tip is then rolled along a glass microscope slide, depositing cells and fluid collected from the endometrial surface (Figure 1). The slide is air-dried, fixed in alcohol and stained (i.e., Diff-Quick stain). Examination of the stained cytological specimen is done under a microscope.



**Figure 1. Rolling an endometrial swab onto a glass for cytology**

The quality of the cytology sample is first evaluated by observing the number of endometrial cells present. Then, the presence and relative number of inflammatory cells (white blood cells, especially neutrophils) (Figure 2), bacteria, fungi and other debris is recorded. Presence of a significant number of white blood cells (i.e., more than 1 to 2 neutrophils per high power field) is an indication that significant inflammation is present. Absence of inflammatory cells generally indicates the absence of active inflammation and often negates the need for bacterial culture, although false negative cytological evaluations certainly occur.



**Figure 2. Inflammatory cells from the equine uterus**