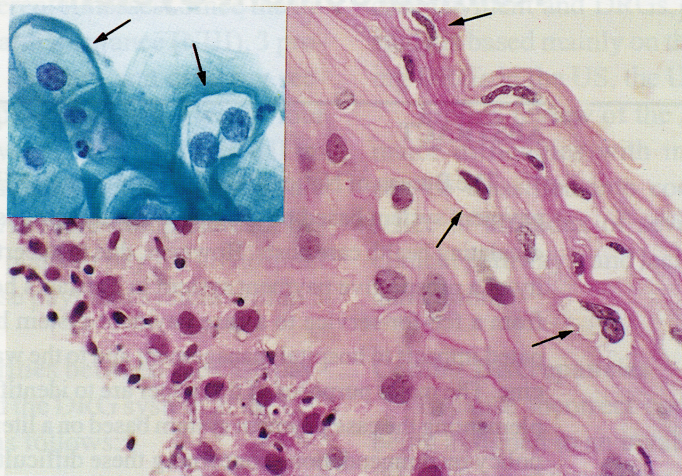


IMPRESSIVE IMAGES

Impressive Image



Koilocyte

Koilocyte is a particular change of squamous epithelial cells. It is seen not only in paraffin tissue sections but also in cytological smears. It is often seen as a change in epithelial cells with HPV infection and is of significance in diagnosis. Koilocyte is a term defined in 1956 by Ross and Durfee from the Greek word *koilos* meaning hollow. Previous to this, in 1949, Ayre described a similar cellular change as “halo cell” or “neuro-carcinoma”.

Koilocytes have enlarged, hyperchromatic, wrinkled and often homogeneous, single or multiple nuclei, surrounded by a clear cytoplasmic zone or halo that varies in size but is generally sharply demarcated at the periphery. The peripheral cytoplasm is dense, usually eosinophilic (in tissue section) or green (in pap smear) (see upper corner). These are located in the superficial and/or intermediate layers of the epithelium (in tissue section). The nuclei of koilocytes contain no nucleoli or inclusions and the nuclei are not molded. The peculiar appearance of the nuclei is caused by the presence of numerous viral particles that cannot be digested by deoxyribonuclease and the perinuclear zone represents cytoplasmic necrosis.

In short, koilocyte is a type of degenerative change of squamous epithelial cells after infection with HPV. It is believed that the virus infects the epithelial basal layer which then gradually reflects serial changes including degeneration during cell growth and differentiation. This is why koilocytes are only seen in the superficial and intermediate levels of a pathologic lesion and why the underlying basal and parabasal cells are not visibly morphologically changed except for mild hyperplasia and/or inflammatory cell infiltration.

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