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APPEARANCE OF INTRAEPITHELIAL GLOBULE LEUCOCYTES IN PREGNANT
AND NONPREGNANT UTERUS OF MICE

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Globule leucocytes (GL) and other migrating cells were investigated morphologically and histoplanimetrically in the uterine endometrial epithelium of mice. GL had a round or oval nucleus, and the pale cytoplasm contained several acidophilic granules. Ultrastructurally, these granules were surrounded by a limiting membrane. The other cytoplasmic organelles consisted of a large number of free ribosomes, several rough surfaced endoplasmic reticulum and a moderately developed Golgi complex. These morphological findings, except for the granules, resembled those of the intraepithelial lymphocytes.

Histoplanimetrically, GL and lymphocytes were commonly estimated in the endometrial epithelium throughout the periods of investigation. During estrus cycle, the relative frequency of GL increased from proestrus to estrus, and thereafter, in the metestrus the values decreased gradually, attaining the level of proestrus in diestrus. In the pregnant uterus, the frequency of these cells was prominent in the epithelium of the interplacental regions and increased gradually as the pregnancy proceeded. On the 12th day of gestation, the highest frequency was reached, which is statistically significant as compared with that of each period of the estrus cycle, or the postpartum period. During the postpartum period the frequency decreased further to the level of proestrus and diestrus. Histoplanimetric estimation showed a coincident increase of intraepithelial lymphocytes with GL.

From the morphological similarity and the coincident patterns of appearance of lymphocytes and GL in the the mouse endometrial epithelium, it is suggested that there is a possible cytogenetic correlation between them.