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M CELL-LIKE CELLS IN THE CECAL TONSIL OF CHICKENS

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The presence and morphology of M cells in the epithelium of the cecal tonsil (CT) of the chicken were analysed by histological and histochemical techniques.

"M cell-like cells", a unique cell type in morphology, were detected electron microscopically. The cells possessed a few short microvilli in an irregular arrangement, and at the base of the cells a large number of lymphocytes and macrophages were found to be wedged.

With electron microscopical lectin histochemistry, *Triticum vulgare* (WGA) was found to bind to the M cell-like cells, however no WGA reaction was detected on the follicle-associated epithelium (FAE) in the bursa of Fabricius, which has been thought to be an epithelium corresponding to the M cells in phagocytic nature. In alkaline phosphatase histochemistry the M cell-like cells were negative, but the FAE was positive in the bursa of Fabricius.

With experimental horseradish peroxidase (HRP) treatment, M cell-like cells showed an active HRP uptake similar to that of the neighbouring absorptive epithelial cells. The intestinal epithelium showed no uptake of colloidal carbon particles from the intestinal lumen.

These results suggest that M cell-like cells of the chicken possess some morphological and histochemical characteristics in common with mammalian M cells. However, it seems that the active uptake of foreign materials is not as well developed as that found in FAE in the bursa of Fabricius.