

III. Postmenstrual period.

In this phase the mucous membrane becomes very low; at the commencement remnants of the hæmorrhage are frequently found sub-epithelially, but they are gradually removed. It is noticeable that, in the case of a typical menstruation, blood-pigment very rarely occurs. Rapid regeneration of the surface epithelium takes place.

The type of the postmenstrual glands is exclusively collaborate; the epithelium is low, and the protoplasm scanty.

The further development of the mucous membrane now depends on the new formation of cells in the epithelium. This formation evidently commences either during the hæmorrhage or immediately after. The authors did not observe any mitoses during hæmorrhage, though Mandl reports such; but they noted abundant formation of new cells one day after menstruation. Such new formation of cells takes place during the whole of the postmenstrual period and also in the interval, ceasing at about the time when processes of secretion begin to make themselves observable in the cell-protoplasm, i.e., towards the close of the interval.

These active new formations of cells prove that epithelium must have been previously lost, and their extent indicates that the previous destruction must have been very considerable.

The authors then describe the microscopical conditions of the phase in detail.

IV. Interval.

The cell-regeneration continues during the first half of the interval but is not nearly so active as in the postmenstrual period. As it diminishes, important changes take place in the epithelium. The cells become higher and richer in protoplasm, and the glands follow the change of the epithelium. These changes are described in detail by the authors. Towards the end of the interval the œdematous infiltration of the tissues can be clearly seen, being most in evidence at the surface.

The transition to the premenstrual phase shows the following characteristics. The mucous membrane of the interval is rather higher than the postmenstrual one; the glands are, to begin with, only slightly sinuate, but later on become so much more markedly; and at the end of the interval the formation of secondary sinuses is demonstrable. The epithelium becomes higher and higher; at first it shows no secretory action, and it does not enter on the stage of formation of secretion till towards the end of the interval.

In summing up the results of their investigations the authors emphasise the fact that it was hitherto generally assumed that the