

which diagnostic or prognostic indications could be formulated. During the earlier years the principle was carried out by the aid of certain arbitrary symbols which were employed to represent these various forms; subsequently, however, the general recognition of Pappenheim's nomenclature² rendered it more convenient to replace the symbols by names which had a meaning to the hematologist. A description of the various forms familiarly labelled "lymphocytes" may serve the useful purpose of rendering a search for finer distinctions more frequent among hospital laboratory workers, and an attempt will be made to demonstrate the practical value of greater care in this direction.

The panoptic method of staining introduced by the author named³ has also proved of so great value that it may be said to be essential that blood films should be studied by its aid in all cases. The remarks which follow depend entirely upon the application of this method of staining.

It will be convenient to discuss these cells under three headings:

- (1) The source of the mononuclear cells of the blood.
- (2) The special morphological characters of each cell-form.
- (3) The application of these observations to routine clinical pathological work.

(1) *The different sources of the mononuclear cells of the blood stream.*

While the old problem as to whether these cells come from the lymphoid follicles or from the spleen, or from both, remains only partially solved, we find the following sources to be possible: The lymphoid follicles of the lymph nodes and of the mucous membranes; the Malpighian bodies of the spleen; the connective tissue spaces. Some of the cells may enter the blood directly; others may pass in via the thoracic duct. The wandering cells of the connective tissue spaces, whatever be their origin, may be supposed to be able to enter the blood stream eventually by passing along lymphatic channels. It is questionable whether such cells could be identified again in a blood smear. The cells of the pulp of the spleen, and those in the "pulpar" tissue of the lymph-nodes and the endothelial cells lining the blood-vascular channels are certainly able to make their way into the blood stream, either under normal or under catarrhal conditions. It may, therefore, be assumed that an attempt to identify such cells in the circulating blood might be instructive. According to Patella⁴, the endothelial cells are to be recognized under the form of the familiar "large mononuclear leucocyte," but such an interpretation is not generally placed upon this form of cell.