

ORIGINAL ARTICLES.

THE BLOOD IN DISEASE.

(Continued.)

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The polynuclear leucocytes possess a nucleus which is generally horse shoe shaped or lobulated and even where there seems to be two or three distinct nuclei, a careful examination will often reveal the fact that they are connected by delicate threads. For this reason polymorphnuclear would be a better term.

The lymphocyte, which is practically the same cell that is found in adenoid tissue throughout the body, has a round, deeply staining nucleus with a very narrow ring of protoplasm surrounding it, which takes a purplish hue, when stained by the ordinary method.

The splenocyte is a larger cell than the preceding, the round nucleus staining less darkly, and being surrounded by a considerable zone of protoplasm.

The transitional form is practically identical with the splenocyte, only the nucleus shows one or two indentations, for which reason it was supposed to be an intermediate form between splenocyte and polynuclear leucocyte.

The eosinophile cell in normal blood are almost invariably polynuclear forms containing coarse granules which stain intensely with eosin.

Another distinguishing feature is that the protoplasm of the polynuclear form holds five granules, which from the fact that they stain with a neutral stain such as Ehrlich's triacid mixture, mentioned above, are called neutrophile granules.

All the mononuclear forms, lymphocytes, splenocytes, and transitional forms, have basophile granules that stain with a basic stain such as methylene blue.

In normal blood one never finds neutrop-

hile granules except in polynuclear cells, but in certain diseases one finds them in mononuclear forms, and to this pathological leucocyte the term Ehrlich's myelocyte is applied.

Likewise eosinophile granules are normally only found in polynuclear forms and when found in a mononuclear cell one has to deal with an eosinophile myelocyte, a cell that is pathognomonic of leukaemia, due to disease of bone marrow.

There also occurs in the different leukaemias a very large atypical cell which resembles a splenocyte more than any other, and to which the term cornil myelocyte has been applied.

The three pathological leucocytes are then,

I. Ehrlich's myelocyte, a mononuclear form whose protoplasm contains neutrophile granules.

II. Eosinophile myelocytes, mononuclear forms containing eosinophile granules.

III. Cornil myelocyte, large atypical splenocytes.

Normal blood contains about 7000 leucocytes to c.c.m., when 10,000 are found to the c.c.m. you have a leucocytosis, when less than 5000 a leukopenia.

CROUPOUS PNEUMONIA.

In this disease, due to the pneumococcus, you have a marked increase in the fibrin of the blood, this can easily be made out by examining a fresh preparation, when after a few minutes the coarse threads of fibrin can be seen radiating out from little heaps of granules, the remains of the hæmatoblasts.

You have also a strong leucocytosis, particularly of the polynuclear forms, and the greater this leucocytosis is the more favorable the prognosis.

It was with this in view that Pilocarpine was suggested as a remedy in this disease, it having the power of producing an artificial leucocytosis.

Another interesting fact is that the eosin-