

Sometimes the latter, before metamorphosis of the blood corpuscles has yet commenced, or is completed, form around them sheaths or canals, which are indistinguishable from the simplest capillaries. This fact has been observed by me only in the heart.

The organization of fibrine into fibres and cells is a matter of direct observation; from albumen the process appears never to occur primitively; so that fibrine approximates more the fibrous tissues yielding gelatine, than albumen does.

In cancerous degeneration and colloid cells are sometimes developed in coagulated blood within the blood vessels around pus corpuscles.

The above are the only histological metamorphoses of blood in the large bloodvessels.

Within the capillaries, in a similar manner, in stagnation of the blood, the blood-corpuscles become associated, and are converted into inflammation-globules; and if the stasis continues, the walls of the capillaries dissolve, and the liquor sanguinis, mixed with the inflammation-globules, extravasates into the parenchyma of the organ. This fact, however, is only inferred, and not directly proved.

A conversion of fibrine into fibres I have never yet observed within capillaries.

21. *Metamorphoses of blood exterior to blood-vessels.*

Much more numerous and manifold are the transformations of blood which has escaped into the surrounding parenchyma of lacerated vessels, and has not been resorbed, than occur in that within the vessels.

As in the latter case, blood-corpuscles also form red, and then uncolored inflammation corpuscles and cells; besides which, they frequently are developed into pigment cells, often filled with black granules, insoluble in mineral acids. The small corpuscles resulting from the transformation of the blood-corpuscles, however, do not always become enclosed in cells, but frequently remain accumulated in large irregular masses.

In the coagulated fibrine, cells originate by the two characteristic modes, and also fibres, areolar tissue, adipose tissue, and even osseous tissue. It is by the metamorphosis alone of this fibrine, that wounds heal *per primam intentionem*, and not by a new exudation.

Melanotic tumors, sarcoma, and osteoid, sometimes owe their origin to blood which has escaped from the vessels.

FIFTH SECTION.

Pyæmia.

Pyæmia consists in a commingling of pus with the cir-