

The latter class of pathological formations are histological malformations, and resemble the malformations of organs, the history of which lost its marvelousness so soon as their normal course of development became known.

To decide how far these pathological productions exercise an injurious influence upon the organism, or how far they are compatible with life, is no more the business of histology than it is for the chemist to consider the influence of different substances upon the living body, when engaged in their classifications. If we were more intimately acquainted with the chemical and organic relations of pathological tissues, such an independent, scientific treatise would exert quite as great an influence upon pathology as does theoretical upon practical chemistry. Nevertheless, the practical utility of histology is sufficiently great at the present time, avoiding all disposition to over-estimate the subject, to command the close attention of the practical physician.

FIRST SECTION.

Development of the elements of tissues.

ELEMENTS OF TISSUES.

The pathological formations are as follow:—

1. Perfect physiological tissues (homologous formations).
2. Imperfect tissue elements or heterologous formations, to which belong—

(a). Granular or amorphous proteine substance, or cyto-blastema.

(b). Fat globules.

(c). Nucleoli or elementary granules, consisting of fat or proteine, or a combination of both, or of pigment, isolated or in a mulberry form (inflammation-globules), and united into irregular groups.

(d). Nuclei.

(e). Cells.

(f). Fibres having a quadruple mode of origin, viz.: fibres more or less defined, formed by cleavage (cleavage fibres), as, for instance, such as occur in exuded coagulated fibrine;* fibres formed through coagulation (fibres of coagulation) in a gelatinoid blastema, as, for instance, sometimes occurs in colloid; fibres proceeding from cells (cell fibres); and

* Schwann has indicated examples of fibres which he could not trace as originating in cells, as in the cartilage of the ribs, in the last transformation of the *Ardea dorsalis*, and in the formation of feathers. From a verbal communication, I am informed he does not view fibres as necessarily produced from cells, but may be formed by a cleavage of the substance in which they exist, constituting cleavage-fibres and cleavage-structures, in an analogous manner, as in inorganic nature. Besides crystals, determinate forms occur, as, for instance, in the formation of the basaltic columns, evidently from a previously liquid mass, or in the cleavage of slates or the formation of asbestos, &c. This admission, however, Schwann considers does not by any means affect the general laws of the development of tissues, which the organic cell remains the fundamental type.