

Doderlein⁶ has reported several cases where carcinomatous cells have necrosed, and it seems that the connective tissue takes a new life after being relieved of the products of carcinoma cells.

Teitschlaender⁷ reports that with mesothorium the cells increase in size, lose their characteristic form and increase in the size of the nuclei. There is pyknosis, round celled infiltration and eosinophilia. Thus the chief action of mesothorium on carcinoma seems to be the inhibition of karyokinesis and activation of leucocytes and destructive changes, allowing the normal tissue to regenerate.

CONCLUSIONS.

In sarcomata the retrogression takes place according to the following law.

1. The size of the body and of the nucleus of the large cells decreases.

2. As they shrink the neoplastic elements elongate, the shape of the nucleus becomes regular, and they eventually assume the form of large embryonic connective tissue cells, forming into a celled mass similar to that of a true fibroma. Thus we may emphasize the fact that sarcomata are transformed by radium into a tissue analagous to that of a fibroma with myxomatous changes.

As regards epitheliomata and carcinomata, under the influence of the radium rays, the following change takes place:

1. The cells gradually diminish in size and staining properties.

2. This atrophy corresponds not to the metamorphosis of these definite formed elements, but to their destruction as shown by keratinization or absorption.

3. The epitheliomatous cells disappear either by means of progressive absorption of protoplasm and nuclei through the leucocytic infiltration or by a sort of granular degeneration.

The other processes associated with the development of every epithelial tumor are arrested, while vascular connective tissue is organized according to the method just described.

4. As proof that the changes initiated by radium in the tumors are such as to lead to immunity, great importance must be attached to the cellular infiltration, first leucocytic, then later a round celled infiltration. It has been recently shown these require different reactions of the tissue for their function, hence radium must affect the blood.⁹ These infiltrations have always