

connective tissue contains, as you see, young fibroblast and lymphocyte cells.

These changes are not the sign of an inflammatory condition, because the multinuclear leucocytes are wanting and because there are no nuclei of pus. Therefore, this tissue is a young embryonic, infiltrated tissue.

Besides these connective tissue changes, there can be seen changes in the cancer cells. These changes consist of a degeneration which bears at the same time both on the nucleus and on the protoplasm of the cell.

The nuclei are generally changed; in some cells they are enlarged; in others they are either multi-lobulated and proliferated or contracted; the chromatic filaments are changed, and many other changes can be observed, such as some pseudo-parasitic bodies and some corpuscles—acidophiles. At the end of this process of degeneration we find cells in cytolysis, with a nucleus in karyolysis, and this is the last expression of the liquefaction of the cell and its nucleus. In short, the radium rays bring about at the same time a cellular degeneration and an embryonic modification, and the modifications end in a stage where the cancerous tissues have been absorbed and have disappeared and are replaced by a fibrous tissue.

This transformation explains why, from a clinical point of view, the big malignant tumors, while disappearing under the influence of radium, leave in their place different little hard fibrous masses.

When possible these fibrous masses must be surgically extirpated, because very often they still contain cancer cells ready for recurrence. For the same reason, when these hard masses are obtained, it is wiser and more prudent to still treat them, for a long time keeping them under the influence of radium and watching them carefully. I will show you a practical case to illustrate this conclusion.

This is a model, made in September, 1908, which represents a case of lobulated epithelioma with proliferating nuclei, developed in the form of an enormous tumor on the left cheek. The tumor projected two inches above the normal level of the cheek and extended on a surface of 3 inches vertically and 4 inches transversely.

After treatment by radium, without any surgical operation, the tumor after five months was reduced to the level of the normal surrounding tissue. The base of the tumor, which at first was firmly and solidly fixed to the face, quite inoperable surgically, gradually became loosened. Through the apex of the tumor, where you see an ulceration, a large quantity of thickish white secretion resembling milk was gradually discharged, being