

teen to twenty inches from the anti-cathode, is probably due to the disposition of vibratory influences of the rays both to overcome local stasis, restoring tone to the muscular coats of the arterioles, and, at the same time, to induce a more active local metabolism."

These views seem very rational and afford us a good working hypothesis; they are probably nearer the truth than any that have yet been set forth, and for that reason are presented at length.

The X-rays when used in moderation may have a tonic or stimulating effect, but, like many another stimulant or tonic, if the use is prolonged, or often repeated, the action is markedly that of an irritant, and an irritant of a very pronounced character. It is chiefly in the role of an irritant that the services of the X-rays are sought therapeutically, being too unsafe a remedy to be trusted as a stimulant, except to a very limited extent.

Without further delving into the subject many very suggestive ideas thrust themselves upon one in this brief and altogether incomplete consideration of the ray's work, only some of which must suffice for our present purpose.

For instance, we have a certain definite form of irritation, causing a well defined—for the most part—train of symptoms, symptoms most closely resembling those of cancer; and as if this were not enough, we find dermatoses caused by this irritation prone to develop epithelioma; and we likewise find as a result of this irritation, hyperkeratoses with a marked tendency to epitheliomatous degeneration. These circumstances point strongly in favor of the irritation theory as to the cause of cancer, and should aid us still further in our study of the cancer problem, for the behavior of the tissues under the ray should teach us much concerning the behavior of tissue affected by cancer.

The testimony of the tissues would seem to favor the theory of a protective mechanism in the body, striving to ward off cancer, and to repair its ravages. It should afford support also to the observations concerning the arrest of malignancy on cessation of the causative irritation. And it should give us a clearer idea of what we may hope to accomplish in the way of treatment.

At the present time our efforts in using the X-rays as a therapeutic agent are largely restricted to the attack upon superficial growths, many of which are distinctly amenable to such measures. But even in the case of the deeper seated growth we sometimes retard its spread, or even cause it to diminish markedly in size by judicious treatment, and add very greatly to the comfort of the patient, perhaps prolonging life.