

other methods of treatment also, that I feel justified in asking your attention whilst I consider, briefly, the value of the X-rays as compared with that of other methods of treatment, and particularly with that by caustics.

Two years ago I addressed this Association on the use of caustics in cutaneous cancers, and I then maintained that *the greater majority of all cases* of cutaneous cancer could be removed with very slight, if any, apparent deformity, if seen early, diagnosed correctly and treated with the proper caustic on definite lines such as were laid down by me at that time; and that, furthermore, with some exceptions, this surgical method of treatment is superior to an operation with the knife.

A plea most strongly urged in favor of the X-rays is that it does away with the necessity of using the knife in the majority of cases, and that the deformity following the treatment is so slight comparatively with that after excision.

These same arguments were employed by me in advising the use of caustics instead of the knife in suitable cases (and these were the majority of all cases), and that advice was based on the careful observation of nearly twenty years on the results of the two methods of treatment.

It will be my task at this time to describe what, with our present knowledge of the subject, can be accomplished with the Roentgen rays in cases of cancer, and, by comparing the results obtained with those gained by other methods of treatment, give it the proper place, and it has an important place, in our *armamentarium* against the disease.

We will first consider the action of the rays on *external* cancers, and afterward on the *internal* ones.

For the intelligent treatment of any given case of cutaneous epithelioma by either knife, caustic, or X-rays, it is absolutely necessary to recognize not only the form of cancer present, and its tendencies as regards rapidity of growth and the direction of extension, but also the probable extent of the cancerous infiltration into the neighboring tissues.

It is also necessary to know not only what I have just stated as regards the kind of cancer present, but also the proper technique as regards the use of the X-ray apparatus employed, *and very especially also to be able to judge what changes in the tissue, both normal and pathological, are being produced by the rays*, in order to give the proper treatment as far as the character of the exposures and the proper interval of time between the exposures is concerned. The treatment of cases, therefore, cannot be entrusted to one who is purely an electrician, it makes no difference how much he may know about an X-ray machine.

Clinical experience, microscopical studies, and our knowledge of X-rays as regards amount of rays produced and penetration