

makes them resemble a malignant infiltration. They are very painful during their progressing period. A case may last anywhere from five or six months to a year and a half, or longer. Amputation of the extremities has had to be resorted to; abortions, and dead-born children at term have followed this class of burns to the body. It is doubtful whether ever death has resulted from such burns, although it has been asserted as the cause in more than one case. Several suits for mal-practice have followed after some of these unfortunate accidents. In three cases the injuries came on five months after the exposure or later.

The inquiry naturally arises, can these undesirable lesions be avoided and the results that are desired be obtained without them. When the object of the exposure is for skiagraphy or fluoroscopic examination, the answer is, I think, unmistakably yes. But when the object is therapeutic action the question becomes different. The cure of the condition, be that condition either tubercular infiltration, external or internal, neoplasm, chronic skin disease, etc., may depend, and in all likelihood does depend, upon the destructive influence of the radiation. It amounts to the transforming of one pathological condition, not self-limited and possibly irremediable, by another pathological condition which is self-limited and from which a recovery can be made. To have complete command of the production or avoidance of these injuries requires a perfect knowledge of three things, two of which are entirely under the operator's control. (1) Apparatus; (2) technique; (3) idiosyncrasy. Under apparatus there is the character and volume of the current employed to energize the tube, the quality of the tube—hard or soft (low, moderate or high vacuum)—under technique come the position and arrangement of the exposure, distance and time of exposure, protection to the patient, etc. These things being measurable, mechanical and adjustable, are entirely under the operator's control. Idiosyncrasy is an entirely different factor. That there is a susceptibility to the effects of the energy, differing materially in different patients, cannot, I think, be doubted; what influences this susceptibility is being eagerly worked out. The hydrosopic condition of the skin or surface, the acidity or alkalinity of the secretions or exudate vasomotor irritability, anemia or plethora of the parts, resistance to the influence, any or all of these, or other factors, may enter into the composition of this condition. I have no doubt but what in a year from this time considerably more will be known upon this important matter. In closing I might be permitted to reproduce a remark as to the pathology of these lesions. The delay in their appear-