

Pusey in his article summarized the changes that occur in the skin when exposed to the action of the Röntgen rays. These are briefly those produced by an irritant of unusual character, which, when sufficiently intense, leads to the destruction or atrophy of the part. He quotes Ondin, Barthelemy and Darier's statement that "this irritation seems to increase the vitality of the least differentiated elements, while it produces degeneration and atrophy of the more highly differentiated structures—nails, hairs and glands." The effect produced upon a diseased tissue such as carcinoma is "degeneration and absorption of diseased cells and their replacement by healthy connective tissue, without the destruction of the healthy stroma." There is no effect upon bacteria in a culture medium, and the undoubted destruction of bacteria in living tissues is an effect to be explained by increased phagocytosis under the increased condition of activity excited by X-rays.

The actions of X-rays which can be made use of therapeutically are:—

- (1) Causing atrophy of the appendages of the skin.
- (2) Destructive action upon organisms in living tissues.
- (3) The effect upon the metabolism of tissues.
- (4) The power of destroying certain pathologic tissues.
- (5) The anodyne action.

In applying these effects to the treatment of skin diseases, Pusey gives the possibilities of usefulness in those affections in which the following indications exist:—To remove hair, to cause exfoliation of the nails, to cause atrophy or decrease in functional activity of the sebaceous glands, to destroy bacteria, to influence the nutrition of the skin, to destroy tissues of low resistance, and to relieve pain and itching. Pusey does not recommend the use of radiotherapy in the removal of hair, while he found it successful in 75 per cent. of cases, the difficulties and dangers of the work rendered it impracticable. In sycosis and tinea sycosis, good results were obtained, and in acne the results in many cases could be described as marvellous. In lupus and epithelioma, the greatest success was obtained. In eczema, Pusey's opinion corroborated that of Stelwagon, that in the chronic indurated cases it was most valuable. Psoriasis also cleared up readily after a few applications, but it had no effect upon the recurrence. The anodyne effect has been made use of in anal and vulgar pruritus, and its analgesic effect upon the pain of malignant disease of the skin is well known.

In the discussion which followed the reading of these two papers, many of the members agreed with Dr. Stelwagon as to the value of radiotherapy in the diseases mentioned by him and without exception all agreed that its use was to be recommended only in such cases as were not amenable to ordinary methods of treatment.