

RADIUM AND ITS ACTION.

the *Annals of Dermatology*, October, 1906, on "Some Notes on the Employment of Radium as a Therapeutic Agent."

In the spring of 1907 I had the opportunity of visiting the Laboratory, and found much of surprise and interest, and met Dr. Louis Wickham. He consented to write a paper for THE CANADIAN PRACTITIONER AND REVIEW, which was published in the September issue, 1907, on "The Use of Radium in Skin Diseases."

Again in 1908 I visited the Laboratory, where careful research work was being conducted, and where Dr. Wickham and Dr. Degrais had obtained unquestionable and durable cures.

At first Dr. Wickham undertook to observe thoroughly the effects of bromide of radium on epithelial tumors of the skin, on the superficial cancers of the eyelids, nose and ears, in tuberculosis of the skin and in lupus. In such cases he had encouraging results. But when he undertook the treatment of port wine stains, naevi, vascular tumors and keloids he obtained results little short of marvellous, the disappearance of the tumor, the return of the tissue to normal or almost normal color without the formation of cicatricial tissue and without the destruction of the integument.

In September of this year I again spent three weeks in Paris and once more availing myself of Dr. Wickham's courtesy, frequently visited the Laboratory, and observed the methods employed in treating the patients who crowded the waiting-rooms.

In the early days the apparatus employed was not entirely satisfactory, a tube being mostly used, but by a special varnish made by M. Danne the radium salt is now fixed on a flat metal plate or stiff linen. This varnish is permeable to all the radium rays and resists the action of mild heat, water and most anti-septic solutions, but may be destroyed by emersions in either alcohol or chloroform.

In form the metal plates are square or oblong, though the round ones were formerly used. Care is taken that each centimetre of surface has one centigram of the salt pure or diluted with barium sulphate so as to reduce the radioactivity.

This apparatus has a radioactivity of 500,000, with a centigram of 25% of bromide of radium, incorporated with barium sulphate on a centimetre surface.

It is important to know the force, quality and quantity of the rays which penetrate into the tissues. There are three distinct types of rays. The alpha rays constitute about 90 per cent. of all the rays, and are positively electrified particles. The beta

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