

severe lasting renal lesions in guinea pigs with chromates, probably because in these animals the chromates are too toxic in a general way and too slightly effective on the kidneys locally.

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Experimental nephritis in rabbits by subcutaneous injections of chromates.

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Rabbits are relatively more susceptible to the action of chromates than guinea pigs. Animals of from 2,000–2,500 gm. in weight sometimes die after the injection of two centigrams of bichromate of potash. The acute renal lesions produced by large sublethal doses are much more marked than those found in guinea pigs under similar conditions. There is marked albuminuria, much degeneration, necrosis and desquamation of the epithelium and abundant formation of casts of different kinds. The extreme lesions which may develop after a while as a result of crowding of large doses were described by me in 1908,¹ but they do not necessarily follow even repeated administration of large doses.

Fifty animals were experimented upon. The dosage varied between two centigrams and two milligrams. Some of the animals were kept alive for a year or more. So far as epithelial lesions are concerned the experiences are similar to those in guinea pigs, except that the epithelial lesions became more severe and seemed to continue longer after the last injection. Very marked interstitial lesions were observed at times, but they resemble those observed spontaneously² so closely and occurred so irregularly, sometimes soon, sometimes late after the administration of various doses and sometimes not at all, that any definite conclusion of their relation to the injections could not be arrived at.

Hearts and bloodvessels remained normal in all animals.

¹ Ophüls, "Some interesting points in regard to experimental chronic nephritis," *Journ. Med. Res.*, 1908, xviii, 49.

² Ophüls, *l. c.*