

of serum injected intraspinally. Instead of 3.0 c.c. of normal horse serum, Rosenow's serum, or immune monkey serum, 2.5 c.c. were used. The results were identical with those obtained in Experiment I.

The results of these two experiments unequivocally demonstrate that Rosenow's serum is devoid of protective power against poliomyelitic virus, while serum from paralyzed monkeys possesses perfect protective power, as has been shown previously by Flexner and Amoss.

There is a further corollary to this general deduction. Once it is established that the antibodies yielded by streptococci differ essentially from those induced by poliomyelitic virus, the contention that poliomyelitic virus and streptococci are identical becomes untenable.

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**On the comparative absorptive power for drugs of the bladder
and urethra (male).**

By **DAVID I. MACHT.**

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In other communications dealing with the absorption of drugs from the conjunctiva¹ and from the vagina,² published elsewhere, the author called attention to the fact that apomorphin, by virtue of its being a centrally acting emetic, furnishes a convenient means of demonstrating absorption of drugs through unusual channels. If a 1 per cent. solution of apomorphin hydrochloride is introduced into the bladder of a male dog through a hard catheter, the latter instrument being allowed to remain in place, the solution remains in the bladder and owing to the powerful spasmodic contraction of the urethral sphincter in the male dog, practically none of the drug gets into the urethra. Under these circumstances vomiting may occur not sooner than half an hour after the introduction of the poison and sometimes after the lapse of an hour

¹ *Jour. A. M. A.*, 1917, LXVIII, p. 1230.

² *Jour. of Pharmacol. and Exp. Therap.*, Vol. X, 1918, p. 509.

or more, and very often not at all unless the catheter be removed. If, on the other hand, the urethra of the same dog, on another day, be irrigated with the same solution or even weaker solutions of apomorphin, care being taken not to inject the drug into the bladder but to confine the irrigation only to the urethra and allow the fluid to run back, vomiting is produced in every case in from three to five minutes. Inasmuch as vomiting is produced in dogs almost as efficiently by means of morphin as with apomorphin, the same results can be obtained by using that alkaloid. Even strong solutions of morphin confined to the bladder produce either no vomiting at all or only after the lapse of a considerable period of time (half an hour to one hour). On the other hand, the introduction of a little morphin solution into the urethra is followed in the dog by vomiting in a few minutes. The remarkable difference in the absorptive power between the urethra and the bladder noted after morphin and apomorphin, holds good for a large number of other drugs and poisons. The author has studied in this connection the effect of various alkaloids, a number of antiseptics, some local anesthetics and a number of salts. The complete account of the investigation will be published in due time in the *Journal of Urology*. It may be stated in this place that an inquiry into the absorptive power of the ureters is also under investigation by the author.

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On the influence of some opiates and antipyretics on the field of vision.

By **DAVID I. MACHT, S. ISAACS, and J. P. GREENBERG.**

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While the effect of drugs on the acuity and field of vision has as yet not been the subject of extensive study, the work extant, such as, for instance, that of Dreser¹ on the influence of strychnin on the visual function, indicates that important changes in visual perception may be produced by the ingestion of pharmacological agents. In connection with an extensive study of the effect of various antipyretics on different psychological functions, the

¹ Dreser, 1894, XXXIII, 251.