cocaine 0.1, alypin 0.1, sodium chloride 0.2, distilled water 100. The writer had no opportunity to try alypin as a spinal anæsthetic.

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Lumbar Anesthesia. Dr. Alvin Ach (Münch. med. Woch., 54, 1907, August 18).

Corning, an American, made experiments for lumbar anæsthesia with animals in 1885. Bier, independently of Corning's work, used the method on his patients and reported the results in 1,200 cases of lumbar anæsthesia at the Surgical Congress in 1901. So enthusiastic over the efficiency of the method was Bier that he had it done on himself and a colleague. The writer gives a detailed description of the technic as is carried out in the Surgical Clinic of Muenchen. Mostly all authors agree as to the technic, but various opinions still exist as to the selection of the place for puncture, the position of the patient and the kind and dose of the drug which is to be used. Some surgeons inject in the lying, others in the sitting posture. One selects the first or second, another the third or fourth interarticular space for injection. Novacain or alypin are the selected drugs of one and stovain or tropococaine that of another. One injects large, another small doses, one employs concentrated, another dilute solutions. The author uses a 5 per cent. of tropococaine solution of which he injects 1.2 c.c., which equals about .006 of the drug. In short operations he reduces the amount to .003. For laparotomies he prefers the first interarticular space for injection; in operations lower down the second interarticular space is his choice; for hæmorrhoids he has found the third interarticular space the best. In 200 cases of the 450 cases which were observed the outward symptoms and after-effects were marked. In the 250 remaining cases, and especially in the last 150 cases, only about 20 per cent. showed any bad effects. He has had no death or collapse. In cases of collapse he would apply the following treatment: (1) Puncture of the arachnoidal sack for a withdrawal of from 5 to 6 c.c. of fluid. This he believes would remove the anæsthesia at once. (2) Artificial respiration. (3) Subcutaneous injection of caffeine to raise the blood pressure. (4) A bandage around the neck to produce stasis. As remedies to prevent after-effects, phenacetin, asperin, caffeine, etc., have been recommended. Kroening employed profuse sweating with good results. As prophylactic measures he gives: (1) A good technic. (2) The use of tropococaine. (3) Small doses. (4) The solution should not be concentrated. (5) Rest, dorsal decubitus, raising the head, at least after the operation. (6) The pelvis should be raised only when absolutely necessary. (7) Bandage around the neck to produce stasis. cutaneous injection of caffeine after every operation. In laparotomies the pain from tearing the mesentery or from pulling on the stomach and intestines is very well relieved with an hypodermic injection of a 2 per cent. solution of morphine about .015 to .002. In this way gastroenterostomies, resection of the stomach, enter-enterostomies and perityphlitis cases have been operated upon without any attacks of pain. Contraindications for lumbar anæsthesia are: (1) Recent and poorly treated syphilis. (2) Fever of unknown origin. (3) Septic conditions. (4) Diseases of the central nervous system. (5) Marked scoliosis. Ach sees a great future for spinal anæsthesia.

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