

About two minims of the solution are injected, the needle pushed about one-fourth of an inch further, two minims more forced out, and so on, until the point rests just beneath the skin upon the palmar aspect of the digit, when a large quantity is injected. In this way one-half of the finger is injected, and this operation is immediately repeated upon the other half, the entire procedure not occupying more than thirty seconds. The tourniquet is at once tightened, and the cocaine solution is thus held at a standstill for absorption.

The process may be hastened by massage over the injected area. In about two minutes insensibility should supervene. Should the anesthesia not be satisfactory, the injection may be repeated. I have usually found fifteen minims to be sufficient, but thirty may thus be employed without risk. The operation finished, the most important part of the technique presents itself, viz., the elimination of the cocaine.

If the constriction were suddenly and finally removed, the excess of solution would be swept at once into the circulation, and would endanger the comfort, and, perhaps, the life, of the patient. It should, therefore, be let in in small quantities. Loosening the band for a minute, the circulation is restored, and, under sublimate solution, the wound bleeds freely, thus giving escape to whatever of the solution the arterioles have absorbed. A certain proportion is carried into the general circulation. The rubber is again tightened for two or three minutes, and during this time the sutures are inserted, and the dressing applied. Alternate loosening and tightening the tourniquet, and the small quantity of the solution is admitted toward the heart and nerve centres, which are thus gradually accustomed to its presence, whereas they might have been overwhelmed if the entire excess had been at once swept into the circulation. In the direct method the solution is thrown exactly into the proposed line of incision.

The advantages are : (1) The rapidity of the anesthesia (practically instantaneous) ; (2) the small quantity of cocaine applied ; (3) the escape of a good part of the solution injected.

I prefer this procedure in incising felons, removing ingrowing or diseased nails, foreign bodies, etc.

In case of incisions going deeply, as in the extirpation of tumors, it is advisable to penetrate into the deeper tissues, and surround them with a weak cocaine atmosphere. To obtain anesthesia in stretching the sphincter ani, place a tampon saturated with cocaine solution in the rectum, and, puncturing close to the mucous membrane, deep enough to be sure that the upper fibres will be reached, inject in six different places.

In genito-urinary surgery cocaine has been extremely useful ; strictures, regardless of their location, may be divided without pain, two drams of a two per cent. solution being injected with the ordinary