

been conclusively shown that morphine is not a local anæsthetic; that on the contrary it is an irritant, and in the minute quantity occurring in Schleich's solution its general systemic effect must be slight or absent. The advantages of this method are, that the quantity of cocaine used is small, always less than a poisonous dose, and that very large areas may be infiltrated without risk. Its disadvantages are, that the method is rather troublesome and requires rather more time; that the repeated needle punctures, and even the mechanical diffusion through wide areas and loose tissues, may disseminate an already existing infectious material into previously healthy parts. In the mouth, for example, this method used for an operation for a small epithelioma of the tongue has been followed by widespread suppuration in the tongue and the floor of the mouth. The anatomical details of structure may be obscured by the artificial œdema, thus rendering the operation more difficult.

Another method which has gained a wide popularity consists in the use of a salt solution eight-tenths of one per cent., containing from one-tenth of one per cent. to one per cent. of cocaine or eucaïne, at a temperature a little below that of the human body. With care this method furnishes a safe and satisfactory anæsthesia, and avoids many of the objections which may be urged against the methods already spoken of.

Eucaïne with salt alone possesses certain decided advantages over cocaine. It may be sterilized by boiling, cocaine being partly decomposed at a boiling temperature with the formation of irritating substances. To suit the individual case the surgeon may select a salt 1 : 1,000 sterile eucaïne solution for infiltration anæsthesia, or a salt one or two per cent. sterile eucaïne solution, if he prefers to use that method.

Dr. H. Braun, of Leipsic, Berlin, 1898, quoting Heintze, says: "Heintze has tried a number of substances which have been recently recommended as local anæsthetics, guaiacol, guaiaril, orthoform, aneson, and eucaïne A. I will only state here that all possess disadvantages. They are all irritating, some of them injure the tissues, and for infiltration anæsthesia, at least, can be dispensed with." Braun also states in regard to tropacocaine that it irritates more than cocaine, and does not injure the tissues. In its toxicity it stands between cocaine and eucaïne. Its solutions keep better than cocaine and may be sterilized. He considers that it is less desirable than eucaïne, because it possesses less anæsthetic power, is more poisonous and more irritating.—*Medical Record*.