

Adrenalin in Medicine

5—In Combination with Local Anesthetics

THE importance of Adrenalin in the induction of local anesthesia can be estimated by a realization of the fact that one of the major prerequisites of an efficient local anesthetic is that it be compatible with Adrenalin.

In the rôle of synergist to the anesthetic Adrenalin serves a threefold purpose; it blanches the tissues, giving the surgeon a clear field of operation; it confines the anesthetic to the area into which it is infiltrated, preventing absorption and possible toxic manifestations; it intensifies and prolongs the anesthesia by diminishing the circulation, thus obviating the dilution, oxidation and rapid destruction of the anesthetic in the tissues.

The question of the quantity of Adrenalin to be injected with the local anesthetic solution deserves special consideration on the part of the surgeon. It should be remembered that after the effects of the injection of a *large* dose of Adrenalin have been dissipated, after the local ischemia has subsided, the patient is liable to have a secondary hemorrhage, owing to a reaction in the walls of the

vessels which manifests itself in obstinate dilatation. Many instances of sloughing are attributable to the strangulation ensuing upon the injection of too much Adrenalin. It is incumbent upon the surgeon, therefore, to regulate carefully the Adrenalin content of the anesthetic solutions he employs.

In laparotomies and other major operations in which an ounce or more of anesthetic solution is required the proportion of Adrenalin need not exceed 1 in 100,000. This concentration can be approximated by adding five drops of the 1:1000 Adrenalin to the ounce of anesthetic solution. When smaller quantities are to be injected it is permissible to increase the Adrenalin proportion to 1:50,000 or 1:40,000.

The most satisfactory results are obtained by first sterilizing (boiling) the anesthetic solution and then, after it has partly cooled, to add the requisite number of drops of Adrenalin 1:1000. This permits of gratifying flexibility; the surgeon is enabled to vary the proportion of Adrenalin in the anesthetic fluid at will and with a minimum of inconvenience.



PARKE, DAVIS & COMPANY