fetal shock which accompanies birth is reduced if the mother has been anesthetized. For analgesia a mixture of potassium bromide, 20 to 30 grains, with chloral hydrate, 15 to 20 grains is a well-tried preparation. Nembutal, soneryl, seconal and pentothal sodium have been used satisfactorily. A single dose of morphine, heroin, or omnopon at the beginning of the first stage will provide comfort but should not be repeated. Hyoscine hydrobromide will produce amnesia. Demerol is a good analgesic, free from toxic effects. Bromethol (avertin) is especially useful in cases of prolongation of the first stage. Paraldehyde has no depressing action on respiration and is preferable to avertin in the average case.

Nitrous oxide and oxygen is probably the best method available for analgesia and anesthesia. Nitrous oxide and air is a valuable alternative method. Trichlor-ethylene is a quick-acting and effective analgesic. Chloroform is still used extensively in domiciliary practice. Spinal analgesia is seldom employed and is not recommended in labor. Caudal block has been used only to a limited extent in England. For forceps delivery inhalation anesthesia is the usual practice. For extra-uterine version of the fetus cyclopropane with nitrous oxide-oxygen will usually suffice. For cesarean section three methods are available: 1. Inhalation anesthesia with nitrous oxide, oxygen and cyclopropane; 2. Local analgesia; 3. Spinal analgesia. At the present time the inhalation method is most commonly used. 5 references.

F. A. M.


In 1941, Allen showed clinically that a tourniquet could be applied to a limb and the part distal enveloped in ice to produce adequate surgical anesthesia. In this and subsequent studies refrigeration was postulated to produce anesthesia, to increase the survival time of anemic tissue, to control infection and to prevent and control shock. Clinical studies, as a group, have not all been well controlled. Experimental studies are better controlled but have often been equivocal. The question of whether refrigeration prolongs the survival time of anemic tissue remains unanswered although evidence tends to show that it does. Experimental studies of the bacteriostatic action of cold show that it has no value. In spite of praise for the value of refrigeration in shock the results are not conclusive.

The actual production of anesthesia by refrigeration has given excellent results. The question arises as to the possibility that the tourniquet may be responsible for the good results in elderly, toxic patients with gangrene and sepsis.

When the skin temperature is maintained at 8 C., the muscles are usually 9 C. and the bone 10 C. The tourniquet must be applied correctly to insure good results. Further controlled and detailed studies must be made before final conclusions can be drawn as to the value of refrigeration in surgery. 23 references.

F. A. M.


Topical application of local anesthetics to oral mucous membranes sometimes fails. An explanation for such failures may be found by studying the types of mucous membranes. The effectiveness of a topically applied local anesthetic will depend upon the degree of hornification of the tissue to which it is applied. Non-hornified