

recovery of the patient when the abdominal walls are closed. We know that shock may be regarded as loss of body heat and fall of blood-pressure, and hence it becomes necessary that the anæsthetic, and method of using it, should be so safeguarded as to prevent an additional declension of either blood-pressure or body temperature. Since elimination of the anæsthetic, if from the lungs and kidneys, predicates abstraction of heat, it follows that the less anæsthetic there is employed the less will be the drain on the body heat.

A fall of blood-pressure is usually dangerous, but if the initial blood-pressure is high, or if it is desired to prevent any engorgement of the vessels, as in cranial and spinal surgery, chloroform is adopted to facilitate the surgeon's work by lowering the blood-pressure. The addition of oxygen removes the danger of the lessened activity of the respiratory centre. Hemorrhage antecedent to, or involved in, an operation is best met by introducing saline *pari passu* with the anæsthetic; hence we adopt ether infusion, colonic etherization with tissue infusion, or some kindred method.

Prolonged operations are often necessary, and may prevent the use of spinal methods; and their dangers as regards anæsthetics are either excessive fall of blood-pressure leading to profound collapse, or undue stimulation followed by even greater collapse after the anæsthetic has ceased to be used; while an after-danger exists owing to the cooling and shock engendered by the elimination of the large amount of the anæsthetic which has entered and become segregated in the tissues. The first danger is that of chloroform, the second is that of ether. The two conditions being compared, we find that the chloroform collapse is more rapidly and more readily surmounted than is its counterpart due to ether. In prolonged anæsthesia such dangers can be avoided by careful moderation of the dosage. As time goes on, especially if traumatic shock and hemorrhage occur, extraordinarily little anæsthetic is needed, and this minimum should never be exceeded.

The 'mixed method' of using scopolamine-morphine and atropine before the general anæsthetic, is most valuable in such cases, as it allows the anæsthetist not only to lessen the dose required for induction, but practically to maintain anæsthesia without inhalation. If this is overlooked, and the anæsthetist employs a large quantity of the anæsthetic, the patient is subject to grave risks. Overdosage causes extreme shock at the time of the operation, and collapse after its completion.

*Severe or Persistent Vomiting.* It is often necessary to subject a patient to an operation to relieve a condition which itself causes or has caused severe and persistent vomiting. Further, it is often necessary to perform an operation upon viscera interference with which commonly brings about serious after-sickness. Vomiting, at all times troublesome, may actually determine death through exhaustion, since sleep and immobilization are necessary in order that traumatized tissues may heal. Therefore, in selecting the anæsthetic