

with a mixture of chloroform and ether, and sustain anaesthesia with pure ether.

In operations on the brain, I use ether from the beginning, notwithstanding the fact that so many brain surgeons object, holding that this anaesthetic causes hypercongestion of the cerebral vessels; but this objection only holds good when the old-fashioned closed method is used. When ether is given by the open method there is so little difference between its action on the cerebral vessels and that of chloroform that for this reason it certainly is not contra-indicated; besides, the patients do so much better after the operation when ether is given that this alone would be a positive reason to use it in such serious operations. I have never had any surgeon object to ether in these brain cases.

The old method of giving ether, *viz.*, the closed, which has been so much used both in Great Britain and America, is, I think, a thing of the past. In the first place, it is insanitary, the patient breathing and re-breathing his own respired air. The anaesthesia is then not purely a result of the inhalation of the ether, but partially asphyxial.

The majority of patients secrete a great deal of mucus, caused by the hypercongestion due to the limited supply of oxygen. This mucus very often causes a filling up of the bronchi, and often results afterwards in pulmonary oedema. This mucus, particularly that coming from the nasal passages, is often infective, and may produce pneumonia. A great deal of mucus is swallowed during the initial stage of anaesthesia, and being laden with the vapor, acting as an irritant in the stomach, causes a great deal of after-sickness. The congestion of the vessels about the head and neck, and, indeed, the stasis in the whole venous system, produces stertor and tumultuous breathing, which so often handicaps the surgeon, especially in abdominal operations, and causes a great deal of after-headache.

After a little practice with the open method, the administrator is able to produce a smooth anaesthesia, with little or no discomfort to the patient, no extra secretion of mucus, and no venosity; but he has tranquil breathing, and the surgeon is able to do his work with greater facility and ease. The after-effects are infinitely less distressing, with no headache and very little nausea.

My method of administering this drug is very simple. I take the ordinary mask covered with six or eight layers of gauze—I use the gauze in preference to lint, as the air passes more freely through it—I begin by holding the mask about four inches away from the face, and drop the ether on it. The vapor being heavier than air,