

deeply under after the incision has been made through the skin. The essayist believes in giving chloroform drop by drop at four or five seconds intervals at first until the patient's fifth nerve becomes accustomed to it gradually lessening the intervals for a time (say five minutes) *cæteris paribus*; then again increasing the length of the intervals as the heart distributes the anæsthetic equally through the body. The effect of the drug could be judged by the tension and rate of the pulse, which should be constantly observed. The sense of sight detects any hyperæmia, cyanosis or palor of the face and chest, also the condition of the pupil. The most important sense is that of hearing, which enables us to judge of the rapidity and depth of the respirations, the character of the same, whether the passages between the posterior nares and the trachea are freely open, also whether there be mucous in the trachea and bronchi.

This collection of mucus in the air passages occurs more frequently with ether even when administered by skilled anæsthetists and with the influence of atropia; with chloroform more rarely. If it is necessary to change from ether to chloroform we must allow for the imperfect elimination due to collection of mucus.

One medical man calls this "being drowned in her own secretions." Suppression of urine may follow the use of an anæsthetic more often with the use of ether, but as to the cause of this disaster we are still in the dark, and, as has been observed, it may be due to septic infection of the kidneys.

Henry M. Lyman, of Chicago, an advocate of ether, says that the risks from ether increase with age on account of the tendency to bronchial catarrh to a degree which is not conspicuous with the more potent agent chloroform, and cites cases of œdema with lingering death from the administration of ether, one of œdema of the lungs and pleural the administration for the operation lasted twenty minutes. Amount used, three ounces; patient returned to consciousness, but died two hours later. Another died four hours after administration. The *post mortem* showed œdema of the brain and lungs. In another case, that of a hard drinker, $\frac{1}{2}$ -drachm chloroform was given; time, $1\frac{1}{2}$ minutes. Patient died a day and a half after operation. Kidneys showed interstitial nephritis.

R. L. Macdonald, M.D., McGill University, in an article in Woods' Reference Handbook of the Medical Sciences on Idiosyncrasy, says that a friend of his experiences a motion of the bowels every time he administers ether. He attributes the fatal effects of inhalation of chloroform in minute doses to this same cause idiosyncrasy. We should at any rate be very cautious and administer at first by the drop method to observe if such an effect be present.

To illustrate this phenomena we may remember the case of Jennie Lind, the prima donna, who would almost faint from the smell of a rose thrown on the stage.

While this may be one immediate cause of serious symptoms there is, another which may be got rid of by the use of purgatives and intestinal antiseptics repeated as required for some days before hand, namely, the depression from stagnant bile, food and toxins.

Silk, King's College Hospital, gives beef tea four hours before anæsthesia (milk digests slowly), or an nutrient enema half hour before. He deprecates morphia.

Gilbert G. Cottom injects spartein sulphate $\frac{1}{16}$ gr. before administration, and finds it an efficient heart stimulant. Caffeine might be used the same way.

Dudley P. Allen finds that the body temperature varies much more under