

the blood pressure usually rises, while later at the respiratory stimulation stage, it rapidly drops to some points below normal.

From the above facts it might be possible to theorize tentatively that ether anaesthesia is in part responsible to a relation to a certain condition of the peripheral circulation relative to the nerve endings.

POST OPERATIVE NAUSEA

Just a word as to toxic impurities relative to after-sickness. This phenomenon is from a practical standpoint the great disadvantage of ordinary ether anaesthesia.

In an earlier paper I drew attention to a poisonous gas, X derived by the superheating of ether, when in contact with a metal. A few weeks ago I was enabled to analyze it, and found it to be made up of aldehyde, carbon-dioxide, ethylene, carbon-monoxide and others. As all ether is superheated to a more or less degree, in soldering of the cans, there is a possibility of carbon-monoxide being present. In very small traces it will cause nausea and in an air dilution of less than '15 per cent. it has caused death according to Dixon. Ether on being heated in a closed cylinder at 100°C. for one hour, will, on administration, produce excessive nausea. It is not known whether in this case there is a carbon-monoxide relation, for the research along this line has not been completed, on account of technical difficulties.

There is still another factor in after-sickness, and that is the narcotic group. Most people who take alcohol know that if they become very drunk they are going to suffer from after-sickness, and alcohol is a narcotic. Therefore it follows, that if in a certain sample of ether there is not a sufficient quantity of ethylene (or CO₂) we will, in order to induce analgesia, have to give an overdose of the narcotic solvents and post narcotic sickness must follow.

Before closing I wish to emphasize that this is only a preliminary paper and hardly an introduction to the different fields of research on anaesthesia which have been opened up.

DEMONSTRATION

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