As has been said, cases of dropsy from mitral regurgitation very often recover in hospital. The patients, belonging to a class the members of which have to earn their bread, must work hard and undergo exposure, and are frequently subject to hardships and privations. It is under such unfavourable influences that the compensation breaks down, and the reversal of these is often of itself sufficient for recovery. Similar results are furnished by private practice, examples being related.

On the other hand, a gentleman of strong build, who had suffered very little inconvenience from mitral regurgitation, established fourteen years before, but in whom extensive dilatation and hypertrophy indicated considerable reflux, began, after a little overwork, to suffer from cough and dyspnoea, which was soon followed by oedema of the legs, and the equilibrium, thus easily overturned, was never regained.

BROMIDE OF ETHYL AS AN ANÆSTHETIC FOR SHORT OPERATIONS, AND AS A PRECURSOR TO THE ADMINISTRATION OF ETHER.

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It is now generally admitted that the essentials of anæsthesia are not satisfactorily attained by any of the anæsthetic agents in ordinary use. Of the dangers of chloroform and the inconveniences of ether, we have lately been forcibly reminded. All this suggests the need for further inquiry. At such a time, the claims of new anæsthetics merit particular attention. The attempt now being made in the United States by Drs. Chisholm and Prince, to reintroduce bromide of ethyl as an anæsthetic for short operations and as a precursor to the administration of ether, presents many interesting features. Before alluding further to these, it may be as well to give a short account of the chequered career of this drug as an anæsthetic.

Hydrobromic ether or bromide of ethyl (C_2H_5Br)—a direct combination of bromine with the ethyl radicle—discovered by Sérullas in 1829, was first used as an anæsthetic agent by Nunneley, of Leeds, in 1849 (*Trans. Prov. Med. and Surg. Assoc.*, London, 1849, vol. xvi, p. 206, also p. 325). At that time, chloroform monopolised all attention in this country, and ether in the United States; hence the new anæsthetic was ignored.

No further experiments were published until the meeting of the British Medical Association in 1865, when Mr. Nunneley again championed the drug, and stated that for some time he had not performed any serious operation, in private or at the Leeds Infirmary, without using either it or "chloride of olefant gas," both of which he regarded as preferable to chloroform (*BRITISH MEDICAL JOURNAL*, August 19th, 1865, p. 192). However, nothing came of this; and bromide of ethyl was forgotten, as an anæsthetic agent, until Rabuteau published an account of some experiments with it on the lower animals in 1877.

At the annual meeting of the British Medical Association at Cork, in 1879, Dr. Turnbull advocated its use for anæsthetic purposes, he then being unaware of Nunneley's and of the French experiments. Subsequently, he published a very favourable account of its use in a large number of cases (*Philadelphia Medical and Surgical Reporter*, March 6th, 1880). About the same time, Dr. Levis, of Philadelphia, also recorded his experience of the drug in glowing terms (*Philadelphia Medical Times*, January 17th, 1880).

As the result of these favourable experiences, bromide of ethyl was extensively used in the Philadelphia hospitals and elsewhere in the United States, as a substitute for ether and chloroform. But this position it was unable to maintain; for, before the end of a year, two cases of fatal syncope were recorded from its use (*New York Medical Record*, April 3rd, 1880; *Philadelphia Medical Times*, July 17th, 1880).

The publication of Dr. Wood's experiments on dogs, at this critical juncture, gave bromide of ethyl its *coup-de-grâce* (*Philadelphia Medical Times*, April 24th, 1880). Its use as a general anæsthetic was straightway completely abandoned.

As Dr. Wood's is the best account of the physiological action of the drug that has yet appeared, I give here a summary of his conclusions, which certainly ought to be known by those who intend to administer it according to the new method. Dr. Wood says of his experiments: "They show that bromide of ethyl may cause anæsthesia without reducing the blood-pressure; but they also indicate that it is distinctly depressant to the circulation, reducing, when in excess, the force of the blood-current to a very marked extent."

"When the cut-out heart of a frog is touched with a drop of the bromide, or even when it is hung in the concentrated vapour, all movements cease. This, of course, indicates that the drug acts directly upon the heart-muscle or its contained ganglia."

The influence of this anæsthetic resembles, therefore, that of chloroform, and not that of ether; and it is probable that it shares the dangerous properties of chloroform.

These statements, however, must be qualified by the results of other observers, which have shown that, although bromide of ethyl undoubtedly exerts a depressant action on the heart, it does so in a much less degree than chloroform. Thus, while fifty minims of ether and twenty of ethyl-bromide were required to weaken the action of the frog's heart, one or two minims of chloroform rapidly weakened and arrested it. (*Trans. Internat. Med. Cong.*, vol. i, p. 451; *BRIT. MED. JOURNAL*, November 11th, 1882, p. 934.)

An account is given of the experience of the French surgeons with the drug in the *BRITISH MEDICAL JOURNAL* of 1880, vol. i, p. 820; also in Terrillon's article in the *Bulletin de Thérapeutique*, 1881, p. 337. It has never had a fair trial in England; but cases have been reported from Glasgow, in which it was very successfully employed (*Glasgow Med. Journ.*, March 1880, p. 259).

Having thus briefly recapitulated the chief facts in the history of bromide of ethyl, I will now proceed to give an account of its reintroduction by Dr. Chisholm on an independent basis in 1882. He says: "I have found that its action is so very evanescent that it can never take the place of chloroform or of sulphuric ether for any surgical operation, which requires some time for its performance; but for all quick work which can be done in one or two minutes the use of this anæsthetic agent leaves nothing to be desired." The time being so short, every preparation for the operation should be completed beforehand.

The mode of administration was as follows. A towel, between the folds of which paper had been put, was made up into a small nearly air-tight cone. Into this was poured about a drachm of the bromide of ethyl, and it was immediately inverted over the nose and mouth of the patient. To ethylise completely, a saturated vapour must be used, and the inhaler must not be taken from the patient's face once the apparatus has been put over the nose and mouth. Out of over three hundred administrations, the time required to produce deep narcosis did not in a single instance exceed sixty seconds. The anæsthetic sleep thus induced lasts about two minutes; then the patient awakes suddenly, as if from ordinary sleep, without either vomiting, nausea, headache, or any other unpleasant symptom whatever. "These really magical effects," says Dr. Chisholm, "must be obtained from the first inhalation, what I will call the primary anæsthesia. If the operation be protracted, and a second or even a third dose of the bromide of ethyl be inhaled, then I find nausea, vomiting, and heaviness, in all respects as if chloroform or ether had been used. Under this repetition, bromide of ethyl loses all its advantages."

It has been used largely by Dr. Chisholm for passing nasal probes, splitting the canaliculi, scraping out tarsal cysts, strabismus operations, etc. (*Maryland Medical Journal*, December 5th, 1880; *Philadelphia Medical News*, January 27th, 1883.)

Dr. Chisholm has thus succeeded most effectually in demonstrating the value of this anæsthetic for short operations. His experience has since been fully corroborated by Dr. Prince in over five hundred cases. Dr. Prince has also used it largely as a precursor to the administration of ether, and with the best results; and for this purpose he considers it superior, in many respects, to nitrous oxide gas. He says: "The main objection to its readoption will be that it is unsafe. It would seem scarcely necessary to point out that this apprehension concerning its safety has grown out of the acknowledged fact that, as an agent for the production of prolonged anæsthesia, it is a blood-poison, probably by preventing oxidation. In the light of more recent observations, it appears that these cries of alarm were not from the primary anæsthesia, which alone we advocate, and which, in the case of chloroform, is attended by unconcealed solicitude; but the reported cases of death have come from the subsequent poisonous action of the agent." (*St. Louis Medical Journal*, October 1883.)

Should these statements be substantiated by further experience, bromide of ethyl is destined to become a valuable addition to our list of anæsthetic agents.

MANUFACTURE OF PUTRID MEAT.—At Newcastle-under-Lyne, on January 23rd, a butcher was fined £6 10s., with the alternative of two months' imprisonment, for having in his possession 20lbs. of meat in a putrid state, which he intended to make into sausages and brawn. The profits of this kind of business must be large, and we would like to see offenders sent to prison without the option of a fine.