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BROMIDE OF ETHYL,

WHEN AND HOW TO USE IT,

BY

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BROMIDE OF ETHYL

WHEN AND HOW TO USE IT.

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SINCE the fatal cases reported by Drs. Sims and Levis, a few years ago, Bromide of Ethyl has been but little used in this country. I desire to call the attention of the members of the medical profession, in this locality, to some of the advantages which I have found this anæsthetic to possess, in the hope that they may be induced to further experiment with it.

Hydrobromic Ether ($C_2, H_5, Br.$) or Bromide of Ethyl, as it is most commonly called, may be easily prepared by distilling Potassium Bromide with Sulphuric Acid and Alcohol. It is a colorless liquid with a sweetish taste, mixing readily in all proportions with alcohol, but sparingly soluble in water. Its odor, at first ethereal, becomes by partial evaporation extremely garlicky. Though discovered in 1827, it was not until Turnbull of Philadelphia, in 1878, and Levis of the same place, a year later, called the attention of the profession to its desirability as an anæsthetic, that it became at all generally known outside the chemist's laboratory. For a short time it was extensively used both in this country and in Europe, indiscriminately, in all kinds of surgical operations; and more than one case has been reported where the patient was kept insensible from one to two hours.



What wonder then that within the next year, DR. J. MARION SIMS and DR. LEVIS each reported a fatal case! and that the profession jumped at once to the conclusion that its use was necessarily attended with great risk, and refused, for the most part, longer to employ so apparently dangerous an agent.

In spite, however, of its unfortunate introduction, I have administered the Bromide of Ethyl over one hundred and fifty times during the past twelve months, and have come to consider it one of the *safest and most satisfactory anæsthetics that we possess, for short and painful surgical operations.*

In one single instance only have I found the slightest intolerance of its use. My patient, a delicate lad of twelve years of age, had been tenotomized for convergent squint a year previous under chloroform. The operation having been only partially successful, he was brought to me, with the history that "he had nearly died from chloroform at the former operation," and the request that I would use some other anæsthetic.

I at once administered the Bromide of Ethyl, and cut the internal rectus of each eye. During the operation the pulse was full and strong—color of lips, good—breathing free and regular; but just at its completion, the pulse became feeble, the lips pale, and respiration ceased.

The lad was promptly inverted, artificial respiration established, and a few moments later he was comfortably seated in a chair, apparently none the worse for his unusual experience.

My youngest patient was a babe, two weeks old, on whom I performed cauthotomy; my oldest, a woman of sixty, who was iridectomized for glaucoma. In the former case, one-half dram of the Ethyl, and one-third of a minute were the quantity and time required to produce

complete anæsthesia. In the latter I administered nearly two drams of the drug and kept the patient under its influence for over four minutes.

To one young lady who was under treatment for lachrymal abscess and mucocele, it was, at her own request, administered in all some thirty times. At first, one dram of the drug was sufficient to render her entirely unconscious, and the time required averaged about forty seconds; but after repeated trials, nearly double that quantity of the Ethyl was necessary, and a full minute elapsed before anæsthesia was induced. She would invariably fold her arms at the commencement of each inhalation and then make no further movement whatever until she roused up after the probes had been withdrawn, generally with the exclamation: "What have I been dreaming about!" She repeatedly affirmed that the only unpleasant sensation she had experienced in connection with its inhalation occurred on the occasion of its first administration, when, owing to her clothes not being sufficiently loose, she had, as she expressed it, "a horrible nightmare;" that since then she had taken the precaution to remove her corsets before commencing to inhale the Ethyl, and her sleep had been altogether dreamless, or, at least, undisturbed by dreams of an unpleasant character.

In no case under my observation has the slightest nausea followed the use of this drug. I have several times given it soon after the patient had indulged in a hearty meal, and, *per contra*, frequently when as many as six hours had elapsed since anything had been eaten.

The young and the old, the feeble and the strong—those with organic heart disease and those with lung disorders—have borne its administration uniformly well, and I now look upon it, when properly given, as *the*

anæsthetic for diagnostic purposes and for short and severe surgical operations. I am, however, equally convinced that it is neither a safe nor suitable one to employ where the operation to be performed is likely to require more than a few minutes for its completion.

Its mode of administration differs noticeably from that of either Chloroform or Sulphuric Ether. To obtain its most perfect results atmospheric air must be almost totally excluded. The inhaler that I have found best adapted for this purpose is known as Lente's Ether Inhaler—an extremely simple and economical one, and possessing among its other good points the advantage of perfect cleanliness. For my own manipulation, however, I prefer a thick towel folded cone-shape and having between its folds a sheet of legal-cap paper—the paper being essential in order to obtain rapid etherization.

My mode of procedure is as follows : After particularly cautioning the patient not to be frightened or to struggle should he find it somewhat stifling, I quickly pour from one-half a dram to a dram of the Bromide of Ethyl in about the middle of the cone, and at once place the base of the cone tightly over both his nose and mouth—from which position it must not be removed a single second until narcosis is produced ; one breath of fresh air at this stage being sufficient to render that attempt abortive.

I recognize complete anæsthesia either by touching the cornea of the patient, or, which I have found still more trustworthy, by listening to his respiration. It seldom requires more than sixty seconds to produce this condition—often not half that length of time. I then lay the inhaler aside, with full assurance that my subject will keep perfectly quiet for at least one minute more ; and with trained assistants, a rapid operator may accomplish a good deal even in that short space of time.

For diagnostic purposes in painful inflammatory eye and ear diseases, especially among children, I consider Bromide of Ethyl of inestimable value. Take for example a case of Ophthalmia Neonatorum in an infant a few days or weeks old. It is of paramount importance that the surgeon obtain a satisfactory view of the cornea—by no means an easy task, as doubtless all of you have often experienced, and one of no little difficulty even to us who make eye diseases a special study,—a task agonizing to the parent, torturing to the infant, and disagreeable and unsatisfactory to the Doctor even when performed in the most gentle and skillful manner.

How different the case when Ethyl is given. After half a dozen inspirations, the thickened but now relaxed lids may be freely opened, the eyes thoroughly inspected and the indicated drops put *in* the eye and not *upon the outside* as nine times out of ten they will be if the child be kicking and screaming.

Another and important point in favor of this anæsthetic is the rapidity with which the patient after its use is restored to perfect consciousness. I have repeatedly known both children and adults to recover their normal mental condition inside of five minutes from the commencement of the inhalation. In fact a longer period is the exception—a still shorter one the rule.

My friend, DR. CHISOLM of Baltimore, in an article on this subject recently published in the *Maryland Medical Journal*, relates an incident which I had the pleasure of personally witnessing, and for the correctness and accuracy of which I can vouch. I cannot do better than quote his own language, to show how prompt and perfect was the recovery from what was necessarily profound anæsthesia :

“Miss M., a self-possessed little girl, eight years of

age, desired to have an ugly squint corrected, and exhibited no timidity in witnessing the preparations needful for its performance. Prior to getting upon the table she had her collar loosened to remove any impediment to respiration. In doing so she took two roses from her dress and placed them on a vacant chair near by. She was then put on the operating table and the Bromide of Ethyl administered. A very few inspirations produced deep sleep, under which the tenotomy of the rectus was performed. The ethylization and squint operation occupied fifty-six seconds. Within three minutes from the commencement of the narcotism, the child was perfectly awake and ready to get from the table. When on the floor she walked at once to the chair, and within *four minutes* from the time that the anæsthesia was commenced, she was engaged in pinning these roses into the front of her dress with a composure which showed not only no present discomfort, but a complete oblivion of the experience through which she had just passed."

There are two rules to be observed in the administration of the Bromide of Ethyl, which I insist should be rigidly complied with. Always give it in a recumbent position and always have the clothing about the throat, chest and waist entirely loose. I have never found it necessary to give any stimulant in advance, as I invariably do when administering Chloroform, which latter agent I use for all my *longer* operations when the choice of the anæsthetic is left to me. Bearing these two rules always in mind, I am confident that if you will use the Bromide of Ethyl in the manner I have briefly described, you will become equally convinced with myself that for *short and painful surgical operations*, it is the safest and most desirable anæsthetic we have at our command.

