

Selections.

Hydrate of Chloral.

Dr. Jacobi, clinical professor of diseases of children, College of Physicians and Surgeons, New York, in an interesting paper published in the *Medical Record*, gives a very full account of this substance. We give his account of his own experience, and some concluding remarks, which we have no doubt will be acceptable to the profession, as this new anæsthetic is producing a sensation:

Chloral was discovered by Liebig in 1830, it being the final product of the action of dry chlorine on ethylic alcohol. It is a thin liquid, of spec. grav. 1.502; turns thicker gradually, and sometimes changes into an insoluble modification, with development of heat. By mixing chloral with water, the substance gets heated, and within a short time the hydrate of chloral crystallizes in needles. Its difference from chloral consists in the addition of an equivalent of water, yielding the formula, $C_2Cl_3OH + H_2O$. For experimental and therapeutical purposes, this preparation has been found most useful when strictly pure. Impurities are not rare, as in forming chloral by the action of chlorine on alcohol, other accessory products are formed, which have the same irritating effect when in the chloral as in chloroform.

The crystalline needles of hydrate of chloral can be melted down into a solid crystalline mass. It is white or colorless. It is soluble in water; a slight opalescence is found after its being long preserved. Its odour is peculiar, melon-like, somewhat pungent. The solution in water is neutral. When muriatic acid is present in it, a slight addition of ammonia will prove a corrective. Mixed with nitrate of silver, no change of colour ought to take place. When the crystals are treated with sulphuric acid, there ought to be formed a colourless oily layer, turning into a solid mass before long. The watery solution, when mixed with an alkaline solution, turns milky, gets clear again, and yields some chloroform at the bottom of the test tube.

CASES IN PRACTICE.

I. The first patient to whom I administered the hydrate of chloral was a man on board the steamship *Hammonia*. He had been very seasick during the rough passage from Hamburg to Havre, and from Havre onwards. On the 29th of September, he had been without food and sleep for some days; nausea and retching still continued, and he commenced to show the symptoms of approaching exhaustion. I injected into the spare subcutaneous tissue of his abdominal wall, a solution of half a drachm of hydrate of chloral in a drachm of distilled water. His pulse of 90 fell to 68 in twelve minutes, the temperature not being measured, and within a quarter of an hour he fell asleep. He awoke after two hours, asked for food, took a cupful of beef-tea, and retained it. For twenty-four hours he improved; and even in the heavy sea of the following days, was not so sick as to induce me to experiment on him again.

II. A lady of 20, who had suffered from metritis and vesical catarrh for years, and from severe hemicrania, sympathetic vomiting, and sleeplessness, together with serious hysteric attacks during and after menstruation, was taken with the same symptoms in a more than ordinary degree, about the 18th of October. Morphia and codeia did not relieve her complaints, which were further increased by a mucous intestinal secretion and tenesmus. Two evenings in succession, and one morning, she was given two scruples of hypnotic dissolved in two tablespoonfuls of (Croton) water, the medicine each time procuring a sound and quiet sleep, with evident diminution of the morbid symptoms after awaking. No such symptoms, belonging either to the brain or to the stomach, as are noticed after the use of morphia or chloroform, were perceptible.

III. A lady of 25, has suffered from intense parametritis after her second confinement, some years ago. She has never entirely recovered. Her ailments have been increased by hæmatoecle, repeated three times in the course of 20 months, each time taking place during menstruation. There is in her pelvis an old exudation in the left broad ligament, resulting in local and mammary pain, besides a neuralgic pain along the crista ili; and, besides, the remnants of these hæmatoecles, pressing the uterus downwards and forwards in prolapse and antelexion. In consequence of this malposition and some catarrh, her bladder must be emptied from twelve to fifteen times a day, and then she is compelled to rise from six to seven times every night. That her menstruation is very much disturbed by local pain and general symptoms, I need hardly add. She took, two nights before her menses set in, and when the symptoms became aggravated, two scruples of the hydrate of chloral in a tablespoonful of water, and had an uninterrupted quiet sleep for 10 hours, after having not enjoyed a single quiet night for years, in spite of the internal and subcutaneous use of all sorts of narcotics. The next night she had the same effect from two scruples. Her menstruation set in the following day, and she kept her bed, as always during that period, to prevent any disturbance. The dose was reduced to half a drachm for four subsequent nights, each time with the above result. No headache, no constipation, nor any other untoward symptom showed itself afterwards, the effect being confined to producing a sound sleep; for the symptoms, as mammary pain and vesical spasm, returned every day after she woke up. I am not yet prepared to say whether the remedy will have, in this case, a lasting antineuralgic effect, as the original cause is not removed; but the nervous irritability may still be allayed to such a degree as to render her sufferings much more endurable. That such an effect is likely to take place, I feel like concluding from the fact that this last menstruation was not disturbed by hysteric attacks, from which my patient has frequently suffered during this period.

IV. A lady of 30 was confined, on the 19th of October, of her sixth child. Her physical condition has always been tolerably good, with the exception of slight parametritic troubles after her third confinement. This affection was combined with sacral neuralgia, which lasted much longer