

use the words of the report) "very much excited and delirious, fancies there is a broken up train of cars in the ward, points over to the wreck of a locomotive and says many people have been killed, among them his wife!" Half an hour after he was "still quite excited and positive in his delusions." From then, 5 p.m., till 3 o'clock, next morning, he was more or less excited and restless. Delirium after chloral is more likely to take place when the latter has been given in insufficient doses. It is also likely to show itself when the patient is awakened suddenly and not allowed to have his sleep out.

In none of the cases under my observation could any ODOUR OF CHLOROFORM be detected IN THE BREATH. This fact is against the assertion of some who say such an odour can be recognized. When first brought into notice, chloral was thought to act by becoming changed, in the blood, into chloroform, and the effects were referred to the latter. Liebrich and Richardson, from experiments on frogs, rabbits, dogs, pigeons and even human beings, inferred that the blood decomposes chloral, and chloroform is eliminated. The production of chloroform from chloral is easily effected when it is left in vessels in contact with caustic alkalies—and with bicarbonate of soda, when the temperature reaches over 70°. Dr. Gramg thinks, however, it is probable it does not occur during life, while blood is in circulation, not merely on account of the control of vital force, but, also because the alkalinity of the blood is chiefly due to basic phosphate of soda. This fluid, however, contains some bicarbonate of the same base, and at the temperature of normal animal heat, the conditions are present for allowing the change into chloroform. Personne affirms it really occurs, but the odour cannot be detected, though chloroform may be recognized by the usual tests for finding it in the blood. His view is deeper than any former one taken. He says chloral, after reaching the blood, is changed into formic acid and chloroform; which again is ultimately converted into chloride of sodium, and formiate of sodium, under which state it is ultimately eliminated; these are got rid of by the kidneys, and may be discovered in the urine.

Out of the foregoing, a question naturally arises, and it is this: Is there any CORRESPONDENCE between the effects of CHLORAL and CHLOROFORM except as sleep produces. Can one be substituted for the other as an anæsthetic? These were points to which I also gave some attention.

The first point to test was whether chloral would intensify the effects of chloroform. It has been said "before operations, a dose, if given, would render the patient more amenable to chloroform and make the effects of the latter more permanent; the patient sleeping for hours afterwards." This statement, as you will see, was not borne out by the