

grains or less, it is probable that the whole of it is absorbed in a few minutes. In the first of the following cases, the hypnotic effect was produced in ten minutes after the administration of the drug. As the dose of it in that case was only fifteen grains, it is fair to infer that the whole, or nearly the whole of the quantity given passed from the stomach into the blood within that space of time. The stomach appears to be capable of passing into the blood any quantity of hydrate of chloral that may be put into it, provided that the article is pure and sufficiently diluted. Hence any quantity of it may be given at a dose, so far as the stomach is concerned, that it is wise to administer. The presence of food in the stomach would be likely to delay its absorption. Any irritation of the stomach, like gastritis, would probably render that organ intolerant of it, though I have never proved this by experiment. The absorption of the hydrate of chloral by the stomach, then, is easily and quickly induced when it is given largely diluted upon an empty stomach whose mucous membrane is in a normal condition.

*2nd Progress through the System.*—The hydrate of chloral goes from the stomach into the blood unchanged. In the blood it meets with an alkali. The experiments of Dr. Richardson and others show that the hydrate of chloral in contact with an alkali is decomposed and chloroform evolved. Indeed, chloroform has been obtained from the vapor arising from a mixture of freshly drawn blood and hydrate of chloral. We have the authority of Liebreich for stating that when the hydrate meets with an alkali in the blood, it behaves as it does when it meets with alkalies out of the system. That is, as soon as hydrate of chloral reaches the blood by any avenue, it commences to yield chloroform. The amount of chloroform thus given to the blood is proportionate to the quantity of chloral absorbed and also to the alkalinity of the blood. The total quantity of chloral absorbed is not immediately decomposed into chloroform. The drug mixes with the blood, passes with the blood to every part of the organism, and, as it circulates, continues to yield chloroform until it is exhausted. In cases of fever of a low type, such as typhus and typhoid fever, when the blood is highly charged with ammonia, that fluid is in a state to extract chloroform from chloral more rapidly than when it is less alkaline. Under such circumstances a given dose of hydrate of chloral should produce