

inhale it, had his cerebral blood supply charged with the drug. In some of these experiments it was found that the animal inhaling the drug, although his nerve centres were supplied with pure blood, died of heart failure, that showing that chloroform had a direct action upon the heart itself. Some experiments of his own were in the same line. He found that when certain quantities of chloroform were given, sudden and great dilatation of the chambers of the heart followed ; this occurred so rapidly as to seem as though we had here an action upon the muscle fibres themselves, or upon the fine nerve endings (which Berkley and others have now shown to be more common than supposed hitherto) rather than upon the nerve centres in the brain or cord. Dr. Adami thought the conclusion to be drawn from the observations of Gaskell and Shore was that chloroform could act directly upon the heart.

Dr. WILKINS believed the untoward action of chloroform in cases like that under discussion was in the heart muscle itself, and gave his reasons as follows. Some years ago, when performing experiments upon animals, he frequently had stoppage of the heart occur among dogs, which he was able to resuscitate afterwards by artificial respiration. This resuscitation proved the action to have been upon the heart itself ; because, the cardiac and respiratory centres being close to each other in the medulla, if the lesion was central, recovery could not take place in such a short space of time. Most of the members would remember those drowning experiments, where dogs were submerged, some with corks in their trachæ, some without ; the former were capable of being resuscitated, as they could properly aerate their blood and the heart resumed its action, the latter were not. In collapse from chloroform, if artificial respiration were kept up for three or four minutes, the heart might resume its action, showing the collapse to have been the result of the action of the drug upon the heart muscle itself rather than upon the cardiac or respiratory centres.