

six per cent. by the systematic use of the cold bath. In 1881 my partner, Dr. McKeough, published a report of one hundred cases of typhoid fever occurring in our practice, and in which cold bathing constituted the main feature of treatment. The mortality in this series was two per cent., and other physicians have reported equally successful results from similar treatment. I have observed that in most cases where the bath has been effectually used for three or four days, the temperature thereafter does not rise as high, and that other alarming symptoms are less likely to supervene. The explanation is not difficult. The maintenance of the temperature at or near 100° F. for a few days when the cause of the fever is most active and pernicious, reduces destructive metabolism, lessens muscular exhaustion, and preserves in activity the functions of elimination, so that much of the poison is disposed of before irreparable damage is done, and the organism so relieved is able successfully to resist the enemy's reduced forces during the remaining days of the contest. The cold bath not only abstracts heat from the body, but as MacAlister's experiments show, inhibits heat production in the cooled muscles, and so acts beneficially in the inceptive process of heat formation. Winternitz has pointed out quite recently that the white corpuscles are greatly increased in number after cold bathing in typhoid fever, the increase being double, and in some cases quadruple. These observations have been extended and confirmed by Dr. Thayer, of the Johns Hopkins Hospital, who is still engaged in a series of investigations which promise fruitful results. If the theory of phagocytosis be accepted, the conclusion is inevitable that this astonishing increase in the white corpuscles must lead to great and more rapid destruction of the morbid agent that produces the trouble.

In concluding this paper, it may not be uninteresting to present briefly some cases illustrative of the beneficial effect of the cold bath, and I shall first select two cases of scarlet fever which, on account of their similarity and termination, strongly impressed me. In 1872 I attended a young woman in her second confinement. When the child was born her temperature was 104° F., and the scarlatinal eruption was fully developed. Next day the temperature continued

high, and at eight o'clock in the evening registered 105°. Two hours later it was 107°, and coma was coming on. The temperature continued to rise, and at midnight she died comatose, with temperature 110°. Dr. Murphy, of Chatham, saw the case with me, but we could not gain the consent of the friends to use the cold bath, and other means we tried were of no use. In 1884 I was called to see a similar case at Trenton, about a hundred miles east of this city. On my arrival, I found that the woman had been confined four days before; the rash of scarlet fever was fully out: the pulse was 160; temperature 106°, and the patient semi-comatose. Cold bathing was at once resorted to, and as the temperature fell, coma disappeared; the pulse improved in strength, and became less frequent: the stertorous breathing disappeared, and when the thermometer registered 100° the whole aspect of the case was so changed for the better that all were eager to persevere in a plan of treatment that promised so well. During the next four days frequent bathing was necessary to control the temperature, but after that time convalescence was uneventful, although it was remarked that even after fever disappeared the pulse remained 130 and feeble for many days.

During the summer months, few diseases are more fatal to children than acute diarrhoea. These cases usually develop suddenly from some error in diet: the child vomits, becomes restless, moans, soon looks pinched about the face, rolls its head on the pillow, its pulse becomes feeble or disappears entirely from the wrist, and its extremities become cold and blue. In a large majority of such cases, the rectal temperature will be from 103 to 105°, and unless prompt relief be afforded, they will die. It is in these cases the cold bath acts like magic. The moaning and restlessness disappear, the respiration becomes slow and easy, the extremities soon become warm after the bath, and sleep is generally secured, often before the child is removed from the water. A purgative and care in feeding often complete the cure, but the temperature should be controlled by the bath until the danger is past. I have for many years depended on the cold bath or cold sponging in acute bronchitis, and in lobular pneumonia of children; in some cases of lobar pneumonia, in acute dysentery with high fever, and, indeed, in