

of the capillaries of the skin, thus improving the circulation and allowing the cooled blood to go to all parts of the system. If the temperature can be sufficiently reduced by the application of the cold pack, and remains so for some hours, there is in my opinion no necessity for the cold bath. There are, however, cases in which even the pack or cold coil will not reduce the temperature more than a degree or so, and when these are removed the temperature rises again rapidly. I have had two or three such cases in the hospital recently, in which I would now confidently advise the use of the cold bath. In such severe cases the baths should be given early in the disease, so that the patient may be guarded against the effects of a continued high temperature. One great disadvantage has already been mentioned, they cannot be easily given in private practice, as at least three attendants are required, as well as the surrounding convenience for giving them.

Tripier and Bouvret state many instances where the treatment was carried out in villages and country districts near Lyons. In one village there were twenty cases of typhoid; the first nine were treated on the expectant plan, and of these four died; the other eleven were treated by cold baths, and of these none died. In another town—St. Germain—there were 41 cases treated by cold baths, with no deaths. Taking all the recorded cases which occurred in the neighborhood of Lyons under the cold bath treatment, there was a mortality of 3.62 per cent.

Another drawback to the cold bath treatment is the frequent disturbance of the patient. We have always thought that rest of mind and body was a cardinal point in the management of typhoid, while under this system the patient may be taken out of bed and placed in a bath six or eight times a day. In Berlin this is remedied by placing the patient in a sort of hammock, which can be easily raised and lowered.

At this point I would like to refer to the statistics of our own hospital, where the treatment has been largely of an expectant character. The percentage of deaths for the various years is as follows:

Year.	Per cent.	Year.	Per cent.	Year.	Per cent.
1878 ..	20.0	1883 ..	14.4	1888 ..	13.7
1879 ..	13.6	1884 ..	14.0	1889 ..	15.3
1880 ..	19.6	1885 ..	9.6	1890 ..	12.3
1881 ..	12.5	1886 ..	10.8		
1882 ..	15.7	1887 ..	14.4		

The average percentage of deaths, 13.4. Total number of cases, 1381; deaths, 186; per cent., 13.4; died within six days of admission and therefore not influenced by hospital treatment, 64; deducting this number from the total we have an average percentage of 9.2. It will thus be seen that the statistics in our own hospital, under the ordinary form of treatment, have been very much better than the continental hospitals under the same system, and almost as good as some of them under the cold bath treatment. It would appear from this that we have here a milder class of cases, which do not require the cold bath treatment to the same extent.

In order to form an estimate of the number of cases having a persistently high temperature, I had an examination made of a hundred temperature charts, with the following results: One reached 106; ten, 105; thirty-four, 104; thirty-eight, 103. The one whose temperature rose to 106 reached this point but once; the ten reached the temperature of 105 but once; of the thirty-four whose temperature rose to 104, in twenty-six this occurred but once, the remainder—two, three, or four times. Of the whole number of cases, in at least forty-five the temperature rose to 103 more than twice.

From my experience in the hospital I do not think that in more than ten cases out of the hundred there would exist a continuous high temperature that could not be controlled by cold sponging, cold pack or coil, and that, therefore, there would not be a larger number of cases requiring the cold bath.

The principal drugs which have been recommended for internal administration to reduce temperature are quinine, digitalis, salicylate of soda, antipyrin, antifebrin, and phenacetin. Quinine has a very uncertain action, often even in large doses it will not reduce the temperature to any great degree. The cerebral symptoms produced by large doses, as well as the temporary deafness, are unpleasant. Salicylate of soda has a more certain action, and has perhaps been too much overlooked since the advent of newer and more rapidly acting drugs. It is doubtful if in moderate doses it has any depressing effect upon the circulation, and it has the advantage of being also an antiseptic agent. The lessening of the heart pulsation after the administration of the salicylates is probably due to the