

the result differs from the application of the same therapeutic agent to pneumonia. Cold baths kill Americans when they have that disease. But these gradually-cooled baths are uniformly annoying and depressing to the patients. They don't like them. Neither have they been proved to reduce temperature permanently any better than the sponge-baths do.

Several cases were treated this fall upon the Kibbe bed. Its action and effectiveness were similar to immersion in the bath-tub. It did not eliminate the fever from the disease, nor were the patients pleased with the moist luxury of its antipyretic appliances.

The use and value of cold water and quinine are quite uniformly taught at the Bellevue Hospital clinics, and the students there assembled probably go away in the belief that, with a moist sponge and quinine pills, the mortality rate of their typhoid cases will be wonderfully lessened. There is nothing in the statistics of the cases that have been thus treated at Bellevue Hospital to warrant such confidence.

The antipyretic treatment began to be popular in 1873, and it has gradually become more uniformly adopted in the wards since then. In 1873 and 1874 there are records of twenty-three cases. Of these, three died, or about thirteen per cent. Of those that died, two had a regular antipyretic treatment of quinine and baths, and one of them died from hemorrhage. The third had quinine only, and died from a complicating pneumonia. Of the cured, eleven had only mineral acid or some refrigerant drink; five had quinine in antipyretic doses and three had both quinine and baths. This record does not prove much in favor of the new treatment.

In 1877, and up to October, 1878, there are records of thirty-eight cases with fourteen deaths. Three of the fatal cases were brought in either moribund or so exhausted by previous neglect that they should not be reckoned in the percentage of mortality. This would then be twenty-nine per cent. Of these thirty-eight cases, thirty-four were treated antipyretically, twenty by quinine and baths, and fourteen by quinine alone. Of those who died four had hemorrhages and one perforation; the rest died from paralysis of the heart. Of twelve cases found recorded in the year 1868, all were cured. The treatment was expectant, with perhaps a mineral acid or spirits mildereri.

At the Massachusetts General Hospital, from 1828 to 1836 inclusive, there were two hundred and nineteen cases, of whom thirty-one died, or about fourteen per cent. The percentage given for the hospital at other times, and previous to antipyretics, is thirteen.

At Bellevue Hospital, in the years 1868, 1873, 1874, 1877, and 1878, there were seventy-three cases. Of those treated antipyretically, twenty-four per cent died; of the others, twelve per cent, died. Out of this seventy-three, of the

seventeen that died, five had hemorrhages, two perforation, three were brought in moribund and are not reckoned in the percentage, while one had a double pneumonia. Of these seventeen there were six who had no antipyretics applied; one of these had a hemorrhage. Of the other eleven, four had hemorrhages, two perforations, one a double pneumonia. In September last two cases were treated successfully on Kibbe's bed.

It will thus be seen that since the introduction of antipyretic treatment into Bellevue Hospital the percentage of mortality has doubled; and, further, that the mortality is nearly twice as great as the averages given by Jackson and Murchison. We do not, however, place any over-estimate upon the value of these statistics: but at their very lowest it seems reasonable to assume that they do not prove the value of the antipyretic treatment.

The theory of this treatment, as is well known, is based on the belief that eighteen or twenty days of an average temperature of 104° will cause degeneration, and possible paralysis of the heart, or a like effect upon the brain. Also upon the belief that the frequent and energetic abstraction of heat will at length reduce the quantity generated. As regards the first point, it is perfectly well established that a human being with the digestion not seriously impaired, can live for five weeks at a temperature of 104° . Those who have watched cases of catarrhal phthisis, with a high temperature for months, must wonder how only ten days of the extreme temperature of typhoid can be so very pernicious. It may be that caloric is proportionately much more vicious at 106° than 104° , and that digestion and assimilation are much more impaired. We are not attempting to refute antipyretics, but only to show that, perhaps, in America its value is not proven.

Niemeyer expresses much delight at the discovery of the gradually cooled bath. Wet packs, he admits, while they abstract heat, increase its production also. On the contrary, the baths, he asserts, not only abstract heat, but reduce the production thereof. How they achieve this marvellous superiority he does not explain; nor have we been able to find any one who could make it clear. Practically, the baths are as exhausting as the wet packs. The percentage of relapses, it is not denied, may be increased by their use. In the only case with relapse among the seventy-three at Bellevue, baths and sponging were most energetically used. The possible increase of danger from intestinal hemorrhage is also admitted by the Germans.

Of twenty-four cases treated at Bellevue by baths and quinine both, two had hemorrhage. Of fifteen cases not having antipyretic treatment, one had intestinal hemorrhage.

The antipyretic treatment of typhoid fever