

he does with tubbing every fourth or fifth hour, and the disturbance unavoidable in the lifting out of bed. There were five patients admitted in too feeble a condition to bathe, not one of whom died.

Thirdly, there is a group of cases which on admission present serious complications—hæmorrhage, signs of perforation, very intense bronchitis, pneumonia, pleurisy or intense meteorism with severe diarrhœa. On account of hæmorrhage the baths were postponed on several occasions. There was no instance in which on admission the pulmonary symptoms seemed to contraindicate the treatment.

Fourthly, there are cases which were not bathed at first because the diagnosis seemed doubtful. Two of the fatal cases, to which reference will be made shortly, were not recognized clinically as typhoid fever. Each autumn we have a certain number of cases of malaria which present features closely resembling typhoid fever—so much so that baths have been given. These are instances of the so-called æstivo-autumnal fever, in which the organisms may at first be difficult to find. In other instances with a strong suspicion of malaria for a day or two, the symptoms of typhoid fever have developed subsequently, but the temperature meanwhile has fallen below the bathing point. In several cases the condition at first resembled tuberculosis.

And lastly, the baths have been frequently changed to cold sponges, on account of hæmorrhage, profound weakness, tenderness and swelling of abdomen, signs of perforation, and in a few cases because of the active protestation of the patient. The sponging, when thoroughly done, is almost as formidable a procedure as the cold bath; indeed, we have had patients ask to have the baths resumed.

The following are among the most important reasons which caused transient suspension of the method: Hæmorrhage, 13 cases; perforation, in which condition even sponging is rarely allowable, but in which the extremities may be bathed without disturbing the patient; on account of great weakness and prostration, 11 cases; on account of active mental symptoms, for one day in one case, for two days in another; for extreme tenderness of the abdomen, for one day, one case; for severe bronchitis, for intense laryngitis, after operation on abscess of parotid, for severe phle-

bitis, for pleurisy, each one case. In many of the fatal cases the baths were suspended for twenty-four, sometimes forty-eight hours before death.

There were several instances in which the symptoms of relapse were so slight that the treatment was not rigidly enforced.

Of the 356 cases treated during the five years, 299 were bathed, of these 20 died, a mortality of 6.6 per cent.

Of the 57 cases which were not bathed for various reasons, usually because of the mildness of the disease, six died, a percentage of 10.3. This high ratio of mortality in the unbathed cases is, of course, due entirely to the circumstance that conditions mentioned below, interfered with the use of the baths in a group of cases of unusual severity. In the six fatal cases, the histories of which are given in full in another place, in two, *Cases, XI and XVIII*, the diagnosis was wrong; in the one an old man of 70, with consolidation of the lower lobe, the disease was thought to be lobar pneumonia; and in the other, the patient had been in the hospital the year before with enterocolitis, and on re-admission with severe diarrhœa, typhoid fever was not suspected.

In *Case XXVII* the disease was at first thought to be tuberculous cerebro-spinal meningitis—the temperature was low, the nervous symptoms marked, and it was not until parotitis developed that our suspicions were aroused about typhoid fever.

In *Case XXVIII*, after twelve days of moderate fever, severe symptoms developed, with tympany and abdominal tenderness and diarrhœa. It was thought best to use the cold sponges; death was probably due to perforation.

In *Case XXXII* the patient was admitted, bleeding profusely from the bowels, and

In *Case XXXIII* the fever was low, only touching 104° at entrance, and subsequently not rising to bathing point. Death occurred from thrombosis of the middle cerebral arteries.

Two advantages are claimed for hydrotherapy in typhoid fever—a mitigation of the general symptoms of the disease, and a reduction in the mortality. Our experience during the past five years bears out these claims.

In general hospitals, to which cases rarely are admitted before the end of the first week, the full benefits of the cold bath, as described by Brand,