

observed in the sick room. The best-trained nurse is apt to prove a failure unless she is possessed of unlimited patience. Nourishment should be given every four hours or oftener. Milk and soda water when the stomach is irritable; well-beaten eggs and brandy may often be given from the beginning of the second week, the state of the pulse regulating the stimulant. At first enough is given to make the egg palatable, towards the end of the second week, if the first sound of the heart fails, the brandy is increased. Cold water should be given freely at all times, unless one hour before or after taking nourishment, as it might interfere with absorption. If sufficient nourishment is given delirium may be prevented.

But little need be said of the expectant method. It was adopted by most physicians in the American rebellion, small doses of quinine and the mineral acids being the practice. The percentage of deaths was very high, from memory, I think over twenty-five per cent. Long marches and scanty food had no doubt reduced the men, but I am persuaded that an energetic treatment would have saved many.

When the temperature does not exceed  $102^{\circ}$  in the evening, good nursing may carry the patient safely through the disease. Even at  $103^{\circ}$ , if the functions of the skin and kidneys are fairly performed, a good percentage may recover, but when the temperature rises above  $104^{\circ}$ , for a few nights in succession, death is to be feared, unless active treatment is adopted. When the glass stands at  $104^{\circ}$  for more than four or five nights, either death or long convalescence is the almost certain result. As there are many eminent medical men who still hold to the expectant treatment, it may be asked, is there a better one? Have we a more scientific method? I believe we have—in the anti-pyretic or anti-zymotic, for they are like in their action.

If a ferment in the blood depending upon an organized germ is the cause of fever, to destroy the germ would be to reduce the temperature.

Since the external use of disinfectants has become so popular, it naturally occurred to many physicians that if carbolic acid can check the process of decomposition and multiplication of disease germs on the surface of the body, why not introduce it into the blood, where we have reason to believe a specific poison is producing fever. We know that the diseased process in phthisis is often checked for a time by the inhalation of disinfectants. Why not then introduce anti-zymotics by the stomach and rectum as well as by the lungs.

A common sense view of the treatment of enteric fever, based upon our knowledge of its cause, would favor one of the following courses:

First. To destroy the poison in the blood, thereby gradually subduing the disease by removing its cause, or, second, To protect the vital organs from the injurious effects of high temperature, by the application of cold water to the skin. Of the latter method I have had no experience, but for the last two years I have had good opportunity of comparing

the anti-pyretic method with the expectant treatment which I practiced for many years in the States.

Since the first case was admitted into the Port Augusta Hospital, about two years ago, 163 were treated. Many of anti-zymotics were faithfully tried. If one disagreed another was used. Some patients could not take quinine in large doses. In these cases salicylate of soda acted well in medium doses. Nearly all my early cases were treated with large doses of quinine. On one occasion with nine cases of fever in hospital my supply of quinine gave out. I then began to use salicylate of soda, giving 10 gr. every three hours, day and night, until the temperature fell to  $100^{\circ}$  or less at night. The drug was then stopped until the glass marked  $102^{\circ}$ , when three or four ten-grained doses were given from four to ten at night. The temperature was thus reduced again to  $100^{\circ}$ , from which it rarely rises, convalescence usually following in from seven to ten days.

In nine cases iodine and carbolic acid were used alone. Seven of them made good recoveries in the fourth week; in two I had to resort to large doses of quinine before the high temperature gave way. One dose of 35 grains was given every 48 hours. After three or four doses rapid recovery usually followed. Many of our cases suffered from severe diarrhoea, but were relieved by the carbolic and iodine treatment. In 34 cases quinine was used with the salicylate, for although the 10-grain doses of the soda reduced the temperature to  $100^{\circ}$ , it rose rapidly when the remedy was stopped. I found it better then to administer two or three large doses of quinine on alternate nights, then increase the doses of soda after the second dose of quinine. A fall of the glass to  $98$  may be expected in the morning, this is soon followed by recovery. No unpleasant symptoms are caused by these large doses, save the usual deafness when the drug is not retained by the stomach. It proves just as effectual given by the bowels. This is preferable for children. In using the salicylate of soda in the above doses, no injurious effects were observed on the kidneys. When the temperature on admission is under  $104^{\circ}$ , carbolic acid and iodine are often all the treatment required. But if the glass marks over  $103^{\circ}$  after five days' treatment, one dose of quinine of 40 grains will not only reduce the heat to  $100^{\circ}$  at night, but also ensure a distinct intermission in the morning for one or two days after. Meanwhile the acid and iodine may be continued. To secure an intermission in the morning is of great importance in the treatment of enteric fever. By this a continued fever, or more correctly a remittent fever, is converted into an intermittent. The reduction of heat in the intermission may save the patient by allowing nature to repair the destruction caused by a continual high temperature. If the patient has been intemperate I prefer the carbolic acid treatment with an occasional dose of quinine. When the patient is young and has enjoyed good health, the salicylate of soda always does well in my hands. From my experience in the anti-pyretic treatment for the last two years, I am satisfied that if the patient is seen early enough the disease may be