

HYPOSULPHITE OF SODA IN SMALL-POX.

BY APOTHECARY J. C. ELLIS.

THE power of sulphurous and phosphorous acids in arresting fermentation, and the convenient and safe vehicles afforded by their salts for conveying these substances into the blood, and bringing them to exercise a direct influence on septic matter producing disease, suggested to me the employment of the hypophosphite of soda in a case of small-pox, which occurred in a young girl the year before last, and the result was most satisfactory.

Immediately on the appearance of the eruption I commenced giving five grains of this medicine, in plain water, with a little sugar, every six hours; and in a couple of days increased the quantity to ten grains every six hours. As the effect of the treatment (in my opinion), there was very little, if any, secondary fever, though the eruption was most abundant, confluent on face, back, chest, forearms and feet; desiccation proceeded rapidly, and the young patient was perfectly restored in an unusually short time. I tried the treatment in variola again, last March, and with similar good effect.

Last year a child was attacked with measles in a family where there were four other children, who were not protected by a previous attack of it, and who could not be removed from the house. I dosed these children with the hypophosphite, as a prophylactic, and they escaped.

TREATMENT OF INTERMITTENT FEVER BY THE HYPODERMIC INJECTION OF QUININE.

BY SURGEON J. E. TUSON, M.D., F.R.C.S.

DURING the late epidemic of intermittent fever, which threatened to be very severe at Umballa, I was induced to adopt the treatment of administering quinine by the hypodermic syringe, and the first cases were so satisfactory that I continued this mode of exhibiting the alkaloid.

I selected all the most severe cases of intermittent fever, and injected about five grains of quinine subcutaneously. The operation is not attended with any pain, if done with care and nicety; and all the men on whom I used the hypodermic syringe expressed their preference to having quinine administered in this manner, than by taking it by the mouth. I have not seen the slightest irritation produced by the prick of the needle. The situation generally selected has been the outer part of the lever over the deltoid muscle.

The quinine must be held in solution by the addition of sulphuric acid, and the formula I have generally used has been as follows:—

Quinine \mathfrak{z} ss, Acid, sulph. dil. \mathfrak{mxxv} , Aqua \mathfrak{z} ss. Of this solution I have injected about half a drachm or forty drops. I found the quinine would not dissolve with a less amount of diluted sulphuric acid.

All the cases have been very satisfactory; most of them have recovered, without any recurrence of fever, and the period of defervescence was most marked, as there was no heat of body, or other symptoms denoting latent fever. In some cases slight fever occurred after the administration of the quinine, but only remained to a slight degree, and in two or three days the patient entirely recovered.

I have only had one or two cases requiring a second injection of quinine, but these were patients who had suffered from fever for some considerable time. I have appended about 30 cases,* all of which were under my immediate observation,

and it will be seen by them that the treatment was entirely efficacious.

The advantage of this treatment of intermittent fever is the small expenditure of quinine in comparison to the larger amount required when given internally. As far as my present observations go, five grains of quinine is sufficient to eradicate fever, whereas half a drachm to a drachm is frequently necessary for the cure of a patient by the usual method.

Were this treatment to be generally adopted, a considerable saving to the State would be effected, as the annual expenditure of quinine is enormous; and I publish the result of my cases, hoping that other medical officers will adopt the practice I have found so entirely satisfactory.

** We may add that in the malarious fevers of Bengal the hypodermic injection of quinine has been tried largely at several stations for several years past, and its efficiency and economy reported on. Thus, Assistant Surgeon J. B. White, at Debrooghur, states in his dispensary report for 1868:—"The hypodermic injection of quinine in cases of endemic fevers and spleen enlargements has been largely tried, and with most satisfactory results, especially in the cases of fever with cerebral congestion, which are so frequently met with here."

Dr. Sutherland reports of the dispensary at Kishnaghur:—"During 1867 there was a large attendance of patients throughout, the greater influx being persons suffering from fever, who came to Sub-Assistant Surgeon Tara Chand Bannerjee to be treated with subcutaneous injections of a solution of sulphate of quinine; the quantity injected was usually five grains dissolved in a drachm of water, with two or three drops of diluted sulphuric acid. There can be no doubt that this treatment was very efficacious, the fever was generally arrested by one injection."

VENTILATION IN INDIA.

BY J. E. TANNER, ESQ., M. INST. C.E.

(Continued from page 254, Vol. IV.)

AN artificial system of ventilation has lately come into use, viz., an iron tube projecting slightly above the roof is used as a ventilator. The tube necessarily becomes heated by the sun during the day, and from having a temperature above that of the atmosphere, it creates a certain amount of suction on the air of the building, more or less, according to its height and area. If the tube is taken as one square inch in area and four feet in height, and is heated to say 152° by the sun, the air in it will weigh 12.5 grains. While the atmosphere of 120°, from having a greater density than the air in the tube, will meet this weight by an upward pressure against the bottom of the tube, equal to a like column having the same sectional area and height, which will be 13.2 grains. If the tube is made eight, instead of four feet in height, the atmosphere will then exert a surplus pressure against the bottom of the tube, equal to 1.4 instead of 0.7 grains for every square inch of area that the ventilator may be in section. In a building, there is between the bottom of the tube and the door-way, air that has a temperature of 90°, which has a greater density than the outside atmosphere, and will, therefore, seek to flow out of the building so soon as a door is opened. Can the ventilator prevent all or any part of it from doing so? Assuredly it can prevent all, if necessary, provided the area and height of the ventilator is sufficient to create suction sufficient to overcome the weight that the air of 90° has above that of the atmosphere. The more lofty the building, the higher the ventilator must be made, if it is to cause an up-draught; for the higher the building is, the stronger will be the tendency of the colder air in it to flow out through the door. Whatever the height fixed for the ventilator may be, there must be a certain distance below it, where the upward and downward

* The cases are obliged to be omitted for want of space. The average period in hospital was four days, and the patients were discharged cured.