

sands of patients, and the good results have generally been so prompt and lasting that in few cases has it been necessary to continue it for any lengthened period."

Oxide of zinc has been so long in use that the origin of the treatment is almost lost in obscurity. It appears that as far back as 1837 Dr. Busse, of Berlin, recorded the case of a gentleman who, after taking a scruple of the oxide daily for some months for epilepsy, became cold and shriveled, and his skin like parchment; but this observation attracted but little attention. Some years later the property of drying the skin was noticed by the late Dr. Robert Dickson, of the Hospital for Consumption at Brompton, in some patients to whom he administered it as a general tonic and for diarrhoea, and this led him to give it with a view of checking nocturnal perspirations. Mr. Verue Edwards, the well-known resident officer at the Brompton Hospital, gave the new remedy an extensive trial in some patients under the care of Dr. John Hutchinson, of spirometer fame, who had temporary charge of the wards. The treatment was then adopted by the late Dr. Theophilus Thompson, who, in a lecture delivered in the spring of 1851, says, "No remedy which I have as yet employed has exercised so uniformly favorable an effect in moderating the perspirations." But he adds, "The preparations of zinc occasionally fail to accomplish the object, and in some instances after succeeding for a time lose their power." Many papers have since been published confirming these facts, but they have thrown no additional light on the subject.

The oxide of zinc is usually given at bed-time in from five to ten-grain doses made up into pill with extract of henbane or conium. The hyoscyamus is said to prevent sickness, and probably exercises an influence allied to that of its more powerful congener, belladonna. The oxide is sometimes given in powder, but in this form is not unlikely to upset the stomach. It must be admitted that even in large doses it not unfrequently fails; some writers say in nearly a third of the cases. I have used it very frequently, but have no notes available for statistical purposes. It is said to check other forms of pathological sweating, as in intermittent fever and acute rheumatism, for example. Sulphate of zinc in two-grain doses will often check the sweating of phthisis, but it has no advantage over the oxide, and is seldom used for this purpose. How the zinc salts act in these cases is not well understood, and our knowledge may be summed up in the vague statement that they are "astringents."

II. *Atropia in Night-sweat*. — Dr. Milner Fothergill, in an interesting article recently published in the *Practitioner*, says: "The most potent of all anhydrotics in my experience is unquestionably belladonna. We are indebted

to Dr. Sidney Ringer for our knowledge of this property of belladonna, and the debt we owe him can only be sufficiently estimated by those who have an extensive experience of phthisis, and who give the drug a fair trial. I have no hesitation in saying that the use of this agent completely changes the aspect of many cases of pulmonary phthisis. For the arrest of the exhausting night-perspirations of phthisis belladonna is as potent as digitalis is in giving tone to a feeble heart." Dr. Ringer was led to try the influence of belladonna on sweating from the remarkable power it exhibits of checking the secretion of milk when applied to the breast. Soon after the publication of his papers I made, at his suggestion, some observations with the view of testing the value of hypodermic injections of small quantities of atropia in checking the sweating of phthisis. The drug employed was the sulphate, the dose from $\frac{1}{100}$ to $\frac{1}{10}$ grain. The conclusions were arrived at as the result of experiments made on sixty patients, who were seen at least twice a day, morning and evening.

Age, sex, and temperament in no way influenced the results obtained; the injections were successful in men and women, in young and old.

The presence or absence of fever did not influence the result. In nearly all the cases there was some elevation of temperature; in some it was but little above the normal, while in others it ranged from 102° to 103° F., or even higher.

The beneficial effects of the treatment are not confined to any particular stage of the disease.

The presence or absence of debility does not affect the result; in some cases the patients were in bed, suffering from great prostration, while in others they were well enough to be out of doors the greater part of the day.

The fact of the perspiration having or not having commenced at the time of the injection is of no importance. In a case in which the patient was perspiring very profusely over the whole body an injection was given; in five minutes the perspiration was very much less, and at the end of half an hour his skin was quite dry.

The benefit derived from the injection lasts in most cases for several nights, so that it need not be repeated every day. An injection once a week or once in ten days will often suffice to keep the perspiration in check.

In many cases the effect of the drug is delayed, no benefit being experienced on the first night; but on the second and succeeding nights the sweating is completely checked. The beneficial effects of the drug, when lasting several nights, appear to pass off gradually, the perspiration coming on earlier and earlier every night. Thus it was noticed that $\frac{1}{100}$ grain given