

at bed-time would often produce no effect that night; on the next night, no further injection being given, the perspiration would be completely stopped; on the third night the patient would be free from perspiration till five or six in the morning; on the fourth night it would begin at two or three in the morning; while on the fifth and subsequent nights it would be as bad as ever.

It is not essential to give the injection at bed-time; in fact, in some cases when the action of the drug is required on any particular night, the earlier in the day it is given the more likely it is to prove successful. Sometimes too when the drug is given at bed-time partial relief is obtained on that night, while on the second and subsequent nights the full effects of the drug are experienced.

The injection of atropia has been used with success where oxide of zinc, gallic acid, and other drugs have been tried in vain. The $\frac{1}{100}$ grain will often succeed where $\frac{1}{200}$ grain has failed. One injection may completely stop the perspiration; and although the patient remains under observation for some weeks, there is no complaint of its return. These cases are not common, but it not unfrequently happens that after a few injections the perspiration, although not completely stopped, is checked to such an extent as to render further treatment unnecessary. An injection of atropia will often relieve cough when in excess of the amount of expectoration, and thus enable the patient to obtain a good night's rest; but it is not only in this way the perspiration is checked, for night-sweats are benefited when there is not much cough and the patient sleeps well. Patients rarely complain of any unpleasant symptom even when the larger dose is given. Dryness of the throat is a condition so common in sufferers from phthisis that any increase in this symptom, unless very marked, will pass almost unnoticed.

The number of cases in which marked and permanent benefit is not derived even from these small doses does not amount to more than eight or ten per cent. The observations having been made for experimental purposes, the drug was given hypodermically; but in practice it would be found more convenient to give it by mouth in a proportionately larger dose. It may be given in pill, or in solution, or in granules. It is stated by Dr. Aquilla Smith that a solution of sulphate of atropia in camphor-water (made with distilled water) will not spoil by long keeping. As to the dose, Dr. Fothergill usually commences with $\frac{1}{2}$ grain by mouth, and increases it to $\frac{1}{2}$ grain. Speaking from a large experience of the drug, he finds that it may be freely used without apprehension as to any serious toxic effects appearing. "Even with $\frac{1}{2}$ grain of atropine the patients," he says, "do not complain much; some dry-

ness of the throat and a little indistinctness of vision being all; while all prefer these to their dreaded sweats. These effects wear off in a day or two after the drug is discontinued or even the dose reduced. I have not yet seen any alarming symptoms produced. This I attribute to the gradual increase of the dose; and I have but little doubt that if $\frac{1}{2}$ grain were given at first many cases would show marked toxic symptoms." Dr. J. M. Williamson mentions a case in which the eightieth of a grain given by mouth produced severe symptoms of poisoning. M. Valpian employs granules each containing half a milligram (about $\frac{1}{100}$ grain).

Atropia will stop other forms of sweating, such as the sweating of acute rheumatism, prolonged suppuration, convalescence, etc. Atropia and belladonna check sweating by a peripheric action on the sweat-glands, but it is not unlikely that they have also a direct central action.

III. *Gallic Acid in Night-sweat.*—Gallic acid is a useful remedy for night-sweating. It is especially indicated where the patient also suffers from slight but frequently recurring hemoptysis or from diarrhea. It is best given in a ten or fifteen-grain dose either at bed-time or three times a day. It is often made into pills with extract of hyoscyamus, the henbane in all probability exerting its own specific influence.

IV. *Quinine in Night-sweat.*—Quinine is another useful remedy. It proves of most avail when there is a considerable rise of temperature at some period of the day. It is frequently given in two-grain doses, but five grains are much more likely to succeed. A large dose (eight or ten grains) administered at once or in portions repeated hourly is a good form. A night-draught composed of quinine, sulphate of zinc, and sulphuric acid is also useful (Ringer). It has been suggested that quinine checks profuse perspiration by depressing the vaso-motor dilating nerves, and so contracting the blood-vessels. This explanation is probably incorrect.

V. *Iron in Night-sweat.*—The different preparations of iron have long been used in the treatment of pathological sweating. Sir Thomas Watson says: "I have frequently succeeded in checking the wasting sweats of phthisis by the tincture of perchloride of iron, given in doses of twenty minims thrice a day, after other expedients had failed me. Steel-wine, the ammonio-citrate of iron, the syrup of its iodide, are all good and eligible forms." Reduced iron made up into five-grain pills often succeeds admirably. In a case recently under observation it stopped the sweating after Dover's powder and oxide of zinc had failed. The patient—a young man—had softening at both apices, and had suffered from profuse night-sweats for six or seven weeks. He took