THE PREPARATION OF PATIENTS FOR AN INJECTION OF 606.

At the present day neo-salvarsan is fast replacing the original 606, otherwise called salvarsan. Not only is the drug at least as successful in its therapeutic effect as the original, but it has also the additional value of easy preparation and an almost entire absence of ill effects.

Every patient who undergoes this treatment should be prepared as for operation, except that the enema should be omitted. An aperient should be given overnight, and a very light breakfast of tea, bovril, or suchlike diet. Milk should be avoided, as its tendency to produce vomiting has been repeatedly proved.

As regards the actual preparation of the skin, iodine is sometimes used, but experience shows that this so stains the skin, especially when applied to the arms of rather stout patients and women in particular, that it makes it very difficult to trace the veins. The application of ether just before the injection is therefore advocated.

Doctors who have given a large number of injections find that it is better to give them as early in the day as possible, largely on account of the psychological effect the delay produces on the patient.

After an injection of the old 606, in spite of all that may be done in the way of careful preparation of the patient, the use of freshly distilled water, filtering the solution, &c., rigors, diarrhœa, vomiting, sweating, headache, and even more serious complications may be expected. With the use of neo-salvarsan, if carefully given, ill-effects are rarely noted, and it is quite usual for the patient to sleep for the remainder of the day. Indeed, it may be given in a consulting room and the patient then driven home, but absolute rest must be ensured on his return.

As regards food after an injection of neosalvarsan, soup, fish, bovril, or the like may be given in about four hours; but with the old 606 it is advisable to wait a little longer, and milk should be avoided.

With an injection of the original, complete rest in bed is essential, otherwise syncope is not unknown. A close watch should be kept on pulse and temperature, and every careful administrator will want to know the amount of urine passed, its character, and to examine for albumen, &c.

Most doctors bring their own apparatus, but a piece of rubber tubing and an old pair of

artery forceps should be provided to dam back the flow of blood in the veins, and also a plentiful supply of hot water. Means should be at hand for warming up the saline or distilled water which the administrator as a rule brings with him.

After the administration, especially with the older drug, any secondary rash may become more brilliant and urticaria may develop. Patients sometimes complain of tasting the drug, tingling sensation in the tongue, and not uncommonly, on the next day, of a mild attack of tonsillitis.

The administration of the drug is a knack, and consists largely in penetrating successfully the lumen of the vein (the median cephalic or basilic being chosen), without the escape of the prepared solution into the perivascular tissues and without an incision being made over the long axis of the vein, the technique of infusion being adopted. At the present day several doses are given, and obviously, should the vein have to be exposed, patients would resent multiple incisions.

The principle of an injection is that, the veins of the forearm having been made as tense and prominent as possible, a needle, attached to a rubber tubing having in close proximity to its base a glass window, is thrust into the vein, and saline, which is contained in a receptacle attached to the distal end of the rubber, is allowed to flow into it. Immediately the puncture is made any administrator who has not had sufficient experience to tell by the feel (which one cannot describe) should lower the receptable below the level of the arm and ascertain, by the presence of dark venous blood in the window, that he has successfully per-forated and entered only the chosen vein. Having ascertained this the receptacle is raised, and at the same time a piece of indiarubber tubing fixed round the arm by the artery forceps is removed. The arm, cleaned with ether, lies horizontally on a pillow covered by a sterilised towel. The solution of the drug is now allowed to flow, and from $\frac{1}{2}$ to $\frac{3}{4}$ pint of fluid in all passed into the circulatory system, a small quantity of saline following the 606 solution so as to wash the apparatus through.

Nearly each administrator of note has his own apparatus, but the above description indicates the principle. All sorts of devices are used for the avoidance of air bubbles, and a nurse will do well to carefully examine the construction of the apparatus which may be handed to her to take to pieces and sterilise before use, so that she may be able to put it together afterwards.

K. H. W.

452



