

- (b) For recipient.—The instruments usually set out for intravenous infusion of saline by division of a vein.

Preparation of Patients.

(a) Donor.—A light meal about three hours before removal of the blood. At the time of operation the vein may be painted with a solution of Tincture of Iodine.

(b) Recipient.—Usually is sufficiently ill to be in bed. No special preparation is required. At the time of operation the area is painted with Tincture of Iodine.

Operation.

Two operators usually work in conjunction, one withdrawing the blood from the donor's arm, the other preparing the vein of the recipient and running in the blood.

The donor and recipient lie on tables or beds, either in the same or, if preferred, separate rooms.

The blood is withdrawn by the wide bore needle from the donor's vein and run into the sterile measured jug, in which has been placed the required amount of sodium citrate solution. As the blood flows the contents should be stirred gently with a sterile glass rod.

Meanwhile the second operator has laid bare the recipient's vein, under local anæsthesia, and opened the vein preparatory to the insertion of the cannula of the intravenous apparatus. When the required amount of blood has been drawn off from the donor, the container is stood in a basin of warm water at a temperature of 120 deg. F. The intravenous funnel is now filled with an ounce or two of sodium citrate solution and the cannula inserted into the recipient's vein, the usual precautions being taken against air passing into the vein. As the citrate solution runs in, the funnel is filled with the blood previously drawn off from the donor. It is allowed then to run in slowly, about fifteen minutes being taken to run in a pint of blood.

At the end of the transfusion the cannula is withdrawn and the vein ligatured in the same way as after an intravenous

saline infusion. The wound is then sewn up and a sterile dressing applied.

After Treatment.

(a) Donor.—Following the removal of the needle, a sterile dressing or small collodion dressing is applied and the donor may go away. No special after-treatment is required beyond a light meal. The dressing may be removed on the following day.

(b) Recipient.—Following the operation the wound is dressed and bandaged. The patient is put to bed and kept in a recumbent position for a few hours, after which he or she may be propped up in a comfortable position, in which he remains for at least 24 hours. If there be special contraindications to the patient lying flat, the operator will state the position in which he wants the patient nursed. No sedative should be required. The wound is treated as an ordinary aseptic operation wound as regards dressing and removal of stitches.

Complications and Dangers.

The above is the procedure in ordinary cases, and as a rule no complications follow the treatment. Various accidents, varying in severity, can occur, however.

We will pass over the usual risks accompanying any intravenous infusion, such as entrance of air or foreign matter into the vein, or infection of the wound, etc.

(a) Donor.—There are usually no complications. Withdrawal of excessive quantities of blood may lead to pallor, faintness and air hunger. If these occur they are treated very simply: withdrawal of blood is stopped and ordinary restorative measures are applied.

(b) Recipient.—(1) Immediate.

(a) Feeling of fulness in the chest and cough indicate that the blood is being run in too rapidly.

(b) Sudden death may occur during the operation from either heart failure due to the extra work imposed on the muscle of the heart in dealing with an increased quantity of blood, or from the most serious accident