

&c., must also here be excluded. Even the danger of entrance of air into the vessels can be suspected in but a single case out of the fifty-seven; and in this case, transfusion was practised by opening the *jugular* vein; while when choosing the proper vessels, (the cutaneous veins of the arm,) with the proper precautions, the danger of its occurrence must be regarded as very small,—owing, perhaps, to the entrance of an amount of air insufficient to produce dangerous symptoms, or perhaps to its entrance being so gradual, and its mixing with the blood so intimate, before reaching the heart, as not materially to interfere with normal circulation. The possibility of coagulation of the blood, with the dangerous consequences of thrombosis and emboly, has not in practice proved as likely to occur as it was ever feared; and the danger of inflammation of the vein at the place of injection, though it has occurred, (as phlebitis has, however, also occurred after simple venesection,) is, as all the other dangerous consequences of transfusion, *insignificant* compared with its value in saving the life of the exsanguinated.

As to the indications in obstetrical practice :

"Whenever, with the presence of symptoms of great exsanguination—general pallour of the skin, cold extremities, small, almost imperceptible pulse, attacks of fainting—restoration through the alimentary canal is rendered impossible, by vomiting up of the remedial and nutritive substances, by inability of swallowing, by severe gastric catarrh, &c., the time has come for transfusion, and I advise not at all to delay this almost dangerous operation." The continuance of flooding—providing nothing else is neglected to stop it—is *no contra-indication, but rather the reverse.*

For the performance of transfusion, Dr. Martin recommends—besides a lancet or bistouri for the incision in the skin, and a glass syringe, seven inches long, amply holding two ounces—a slightly curved trocar, four and a half inches long, (three of which is handle,) the end of the silver canula, receiving the point of the syringe, being funnel shaped, and covered with a thin plate of caoutchouc.* "Having determined on the operation, choose a strong, healthy and willing man, or in the absence of such, a healthy, resolute, not frightened or depressed female, from whom to abstract the blood, and one or more intelligent assistants. Having procured a basin with clear, warm water, of 100° to 104° F., and a smooth porcelain cup, to catch the blood, fill the glass syringe, as well as the cup, with warm water, or immerse the latter in it in the basin. Then, during the same time that you lay bare the median, or if that should appear too small, the cephalic or basilic vein, by means of a cutaneous incision, one to one and a half inches long, and introduce the trocar half an inch, in the direction towards the heart into the vein, (which may to this end be raised a little by means of a couple of threads drawn underneath,)—let an assistant perform venesection on the arm of the individual whose blood is to be transfused. Now, while the blood is running into the emptied cup which may still be allowed to float in the basin, empty also the syringe of the warm water, and at once take up the fresh blood from the cup, being careful to see that the blood in the glass is liquid, and not frothy. Without hesitancy, place the point of the filled syringe in the funnel shaped caoutchouc-covered opening of the trocar canula, which is fixedly held in the vein by a reliable assistant, after removing the stilet, and slowly push the piston inwards. After removal of the syringe, be sure to cleanse it immediately with warm water, unless you think it advisable to refill it at once with the still flowing blood, and to repeat the injection immediately. Examination of the pulse and heart and observation of the features, assures us of our success. Should this not yet be complete the whole procedure is to be repeated, after taking care to have no coagula in the syringe or in the canula. Since it is not always easy to find the median vein, it being collapsed in the exsanguinous, it may sometimes become necessary to look for it on both arms; and it has occurred, and without injurious consequences, that transfusion was performed first on one arm and then on the other.

"Having transfused the necessary quantity of blood, the canula is removed from the vein, and the wound dressed, just as after common venesection. It is, of course, un-