

there transformation in the facies, but also in the psychical state, and in the general well being of the patient.

In the donor, after from twenty to forty-five minutes of continuous flow from the radial artery in a good anastomosis, a gradual pallor of the extreme points, viz., the nose, ears, etc., may be noted. The lines of expression become gradually deepened, the orbital spaces shrunken, and darkened, and if the transfusion unhappily is extended too far, the patient's countenance will finally collapse and reproduce the tragic picture that he was intended to relieve. This occurred in three of my earlier cases. However, since learning to interpret with greater accuracy the first signs and symptoms of too great a loss of blood, we have not witnessed any unfavorable results in the donors. As soon as the donor shows irregular respiration or sighs, is a bit uneasy, or presents a characteristic facies, the transfusion is terminated. The earliest and most constant change noted in the recipient is the almost instant and continuous rise in the blood pressure, continuing up to a certain point, the total rise depending upon the physical state and the quantity of blood transfused. There is also a rise in hæmoglobin and the red count. The most constant phenomenon during the transfusion, on the part of the donor, is the rise in the leucocytes. Careful observations made in all the donors showed that if a careful transfusion is given there may be little or no change in the blood pressure, the hæmoglobin, the red blood count, the respirations, or in the pulse rate. In exceptional instances, the variations were considerable. However, in all cases there was a marked fall in the hæmoglobin, in the red count, and somewhat in the blood pressure, reaching the maximum in from 6 to 12 hours. This is readily accounted for by the fact that as the blood leaves the vessels compensation takes place so that the circulatory system contracts upon the amount of blood left, maintaining thereby the blood pressure, and the pulse rate approximately the same. The hæmoglobin and the red count do not change materially because there has not been a sufficient time for the transference of fluids from the tissues into the circulation, but if the transfusion is continued until the amount of blood lost is greater than can be compensated for, the vasomotor centre, after performing its maximum effort, gives away and a faint results. The gradual rise in the leucocytes during a progressive hæmorrhage was in every instance noted. Of one thing we are certain, that during a progressive hæmorrhage extending over a period of four hours or less, blood counts are of little value in diagnosis; that hæmoglobin estimations and red blood counts give only relative estimations as to the quantity of blood in the circulation; that this quantity can be more accurately estimated by observation of the facies and other superficial parts of the body. Leaving now the technique of transfusion