

Blood Transfusion

(A Lecture by Dr. L. A. Bennett, of Christchurch Hospital.)

Transfusion of blood from one human being to another, the subject of this lecture, is a method of treatment which is becoming more and more widely used.

Historical.—

The results of the earliest efforts to make use of transfusion of blood as a therapeutic measure were, for reasons to be explained, very disappointing. Among the first references to the use of blood in quantity as a method of treatment is the attempt of a physician about the year 1500 A.D. He endeavoured to treat a patient by giving him a large quantity of blood by mouth, the blood being obtained from three boys. His results were not encouraging, as there was no improvement on the one hand and on the other the three boys died.

In 1556, a physician called Cardamus evolved an ingenious use for blood. In accordance with the views of both physical and moral diseases held at that time, he suggested that blood from persons of good morals might be introduced into the veins of those who were guilty of various offences. He further elaborated his theory by using lambs' blood for a similar purpose. Needless to say the results were not encouraging.

During the 17th century transfusion of animal's blood into the veins of human patients was frequently practised in England and France with disastrous results. For about a century following this, the method fell into disuse, owing to the numerous fatalities that were attendant on the treatment.

A revival of the practice occurred last century, and transfusion of blood from one human being to another became increasingly popular. Many deaths still occurred, however, for the reason that the blood of the donor, or person who gave the blood, destroyed that of the recipient, or person who received the blood. The final overcoming of this difficulty, the outcome of much research, represents a

great advance, and has put the use of transfusion of blood on a very efficient basis.

This advance has only been made during the last ten years, and it was only in 1916 that it could be stated that blood transfusion had passed the stage of being a doubtful last resort in serious cases, to become a definite therapeutic measure, for which there are definite indications.

Indications.

The following are the most important indications for blood transfusion.

1. To replace blood lost by hæmorrhage, after the bleeding vessel has been ligatured:
 - (a) Following serious accidents.
 - (b) After operation for a ruptured ectopic gestation, or similar conditions.
2. In certain blood diseases:
 - (a) Pernicious anæmia.
 - (b) Leukæmia.
3. For various hæmorrhagic diseases:
 - (a) Hæmophilia.
 - (b) Hæmorrhage of the newborn.
 - (c) Purpura.
4. To act as a restorative:
 - (a) Before extensive operations in debilitated patients.
 - (b) In debilitating diseases.
 - (c) Shock.
5. In infective conditions:
 - (a) Septicæmia.
 - (b) General peritonitis.
6. In chemical poisonings.

Selection of Donor.

Having decided that blood transfusion is required, a donor suitable to the patient must be found.

The early fatal results of transfusion of both animal and human blood were due to an incompatibility of the two bloods, due to the fact that the serum of the one blood destroyed the corpuscles of the other. On the other hand, the suc-