SUMMARY

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Exchange transfusion is a procedure in which physicians caring for neonates readily familiar with and rapidly instituted in life-threatening situations.

The idea of exchange transfusion was first performed for hemolytic disease of newborn, but nowadays it is performed in many endangering life situations of neonates; for instance, neonatal polycythemia, respiratory distress syndrome, disseminated intravascular coagulopathy, neonatal septicemia, paracetamol poisoning, severe hyperkalemia, neonatal myasthenia.

Aim of Exchange Transfusion:

1. changes the red cells of the recepient for the red cells of the donors.
2. corrects anemia by substituting blood of normal hemoglobin content for blood deficient in normal hemoglobin.
3. exchanges the plasma solutes and proteins of the recepient for those of the donors, and consequently removes antibodies to some degree if they are present.
4. removes some toxic substances, i.e., bilirubin, salicylates, barbiturates.

Types of blood used in the procedure differs according to the situation. It varies from whole blood to a single blood component, i.e., red cell concentrate, protein-enriched whole blood, plasma etc.

The technique has been greatly evoluted from a relatively primitive technique, to a highly sophisticated apparatus with automatic control. Also, the site at which the procedure is performed has been changed to be the umbilical route.

As any type of therapy, exchange transfusion bears some adverse effects; for example, disease transmission and necrotizing enterocolitis. But these, by any means, do not minimize its role as hemotherapy.

Exchange transfusion alone or coupled with other types of therapy provide a valuable defence against some neonatal morbidities helping to decrease the mortality rate.