INTRODUCTION

Anesthetists are frequently met with many patients that are in need for blood transfusion during their anesthetic practice and I.C.U. patients such as shocked patients, patients who are subjected to major surgery or operations that are expected to be associated with blood loss. The primary reason for blood transfusion is to maintain the oxygen carrying capacity of blood. An increase in the circulating red cell mass produces an increase in oxygen uptake in the lung and corresponding increase in oxygen delivery to the tissues *(Miller 1994).*

Blood transfusion may be through the use of whole blood or blood components. The ABO group, Rh type of donated blood should be determined, and the blood is tested for unexpected antibodies. The screening tests for markers of infectivity should also be done *(Stehling & Scottsdale, 1994).*

Although blood transfusion is a life saving treatment in many circumstances, it may accompanied with several serious complications that sometimes may be fatal. These complications are :

- ABO - Rh incompatibility.
- The risk of transmission of infectious diseases.
- Non-haemolytic reactions; febrile reactions; allergic reactions; non-cardiogenic pulmonary odema; graft versus host disease and immune suppression.
- Complication of massive transfusion,
- Circulatory overload,
- Haemosiderosis,
- Air embolism and thrombophlebitis *(Churchill & Davidson, 1984).*

Because of the above mentioned complications of blood transfusion, it should be only resorted to when strictly indicated.

There are two ways of avoiding homologous blood transfusion:

1- Minimizing blood loss (induced hypotension, and drugs therapy).
2- Autologous blood transfusion: preoperative donation, acute normovolemic hemodilution, and intra-and postoperative blood salvage ***(Miller 1994).***

Transfusion of whole blood is contraindicated in treatment of chronic anemias, deficiency of coagulation factors, and in treatment Jehovah's witness patients ***(Sendak 1993)***

This essay has been suggested to discuss all aspects of blood transfusion in anesthetic practice with particular emphasis on its hazards and how to avoid its complications.