

Introduction & Aim of the work

Introduction

With the advance of surgery, demand on blood transfusion is increased and it became one of the pillars of modern safe surgery (*Catania et al, 1995*).

In spite of major improvement in the safety of blood supplies, there is still a great fear amongst patients as well as physicians of transfusion transmitted disease vectors, especially human immunodeficiency virus (HIV) and hepatitis C virus (HCV). (*Vrielink and Reesink, 1998*).

Although, the introduction of HIV and HCV testing were part of a major effort by blood banking establishment to improve the safety of the blood supply, but these tests are not accurate 100% as any test may fail to reveal infectious donors between infection and development of antibodies the so-called widow period (*Jennechien, 1998*).

Other viral risks associated with allogenic blood transfusion include: hepatitis B virus. Epstein Barr virus, cytomegalovirus and Transfusion -transmitted virus (TTV). (*Takahashi et al, 2000*).

Bacterial and parasitic infections are also known to be transmitted in association with allogenic blood transfusion (*Soldan and Barbara, 1999*).

The risks of allogenic blood transfusion are not limited to transmission of diseases, but also, include: allo-immunization, hemolytic reactions, febrile reactions, allergic reactions and graft -versus host transfusion reactions (*Sloop and Friedberg, 1995*).

These complications are virtually absent in autologous blood transfusion. Also, the allogenic blood transfusion is immunosuppressive and recent data have shown associated increased cancer recurrence rates and post-operative infection. (*Innerhofer et al, 1999*).

All these factors have led surgeons to use autologous blood donation programs in elective surgery setting with expected blood loss. Patients with hematocrit more than 33% or with hemoglobin more than 11 gm/dl can donate blood to avoid having to reserve homologous blood during operation. (*Cazenave et al, 1997*).

Recently, the pre-donated autologous blood transfusion became a common procedure and is being used increasingly in elective surgery. (*Perkins et al, 2000*).