INTRODUCTION AND AIM OF THE WORK

Children with haematological disorders requiring blood transfusion or hypertransfusion are prone to hepatitis. Hepatitis might be transmitted by blood or blood components particularly prepared from pooled units.

Hepatitis is attributed to a variety of agents amongst which are viruses, HAV, HBV, NANB viruses.

In 1977 Rizzetto and associates described a new antigen-antibody system be called delta from patients whose sera were positive for HBsAg.

Delta-associated agent is transmitted by super-infection or coinfection of HBsAg carriers, but not terminate ongoing HBV infection. (Caredda et al.,1985). The HBsAg carrier state possibly providing a rescue function to the superinfecting agent (Rizzetto et al.,1980, 1983).

In the chronic HBsAg carriers the most common clinical manifestation is episode of acute hepatitis with a pronounced rise in serum alanine aminotransferase activity for many months, so instances of acute hepatitis

in a chronic carrier previously termed hepatitis non-A, NonB, may actually the episodes of delta infection (Smedile et al., 1982a, Moestrup et al., 1983, Arico et al., 1985, Caredda et al., 1985, Nicholson 1985). Chronic HBsAg hepatitis with intrahepatic expression of the delta antigen is an active progressive disease unresponsibe to conventional immunosuppressive treatment (Pizzetto et al., 1983b, Jacobson et al., 1985).

HDV is transmitted similarly to hepatitis B virus through blood or body fluids and is infective when transmitted by parenteral and non-parenteral routes (Rizzetto, 1983a). Direct parenteral inoculation is the most efficient mode of transmission and accounts for the epidemic spread of hepatitis delta occurs among intravenous drug addicts (Smedile, et al., 1982a , Caredda et al., 1983).

The carrier state of HBV infection may be acquired through icteric hepatitis with positive history of jaundice or anicteric hepatitis without any indication of previous attacks of jaundice. The later group presents the more serious group who transmits the disease silently when they give their blood as blood donors.

Healthy carriers of HBsAg are highly infectious as blood donors probably because of the large amount of material transmitted (Wantzin et al. 1985).

Although screening of blood donors for the hepatitis B surface antigen (HBsAg) has greatly diminished the incidence of post-transfusion hepatitis B virus infection, blood that is negative for HBsAg according to the most sensitive techniques may still contain infectious hepatitis B virus (Hollinger, 1985), and thus be a vehicle for transfusion of hepatitis delta virus. This implies a risk of represented the combined effects of the two viruses.

The prevalence of HBV among Egyptian children particularly those receiving repeated blood transfusions has been estimated (El Marsafy, 1981, Kamal, 1982, Abdel Ghaffar, 1983).

The aim of the present study is to determine the risk of post-transfusion transmission of hepatitis delta virus in Egypt by detecting its prevalence among Egyptian children receiving repeated transfusions of blood.

So sera from polytransfused infants and children with chronic blood disorders were followed up for at least

one year and sera positive for HBsAg were analyzed for delta antigen and delta antibody, and then compared with sera of normal infants and children of HBsAg of the same age and same socioeconomic class.