

Introduction

Hemodialysis (HD) as a routine treatment for renal failure is a process used for patients who are acutely ill and require short-term dialysis (days to weeks) or for patients with end stage renal disease (ESRD) who require long term therapy. It is a removal of waste products during a limited period of time 3-4 hours, during which usually 2-4 liters of fluid overload and removed extract toxic nitrogenous substances from the blood and to remove excess water through the following composition of the blood. It is altered by exposing the blood to a modified salt solution, or dialysate separated from the blood by semi permeable membranes (*Smeltzer & Bare, 2004*).

Children under hemodialysis have a higher incidence and prevalence of hepatitis C virus (HCV) infection than the general pediatric population. In addition, HCV infection affects adversely survival among pediatric patients with ESRD, Risk factors for HCV infection in dialysis patients include number of blood transfusion, duration of HD, mode of dialysis. prevalence of (HCV) infection of dialysis units (DU), intravenous drug use , nosocomial transmission of HCV in HDUs and cross infection through dialysis machines disrupted integrity of dialysis membrane of dialyser reprocessing. (*Natov&Pereira,2005*).

Hepatitis C virus (HCV) infection is a major public health problem with an estimated Global prevalence of 3% of population occurring in about 170 million infected child world wide. Up to 20% of Egyptian are evidenced to be HCV infected mostly in rural areas and older age because of anti schistosomal treatment in beginning of 1920 (*Mohamed et al., 2006*).

Prevalence of HCV positivity among children on hemodialysis average from 10% up to 60%. It differs also in developed and developing countries (*El-Raziky et al., 2007*).

Hepatitis C virus (HCV) infection is a significant problem among children under hemodialysis within dialysis units, nursing staff must take adequate precautions and implement appropriate practices that will substantially reduce the risk of workplace transmission of infection to children and staff within this high risk environment (*Edwin et al., 2009*).

Nurse have a major role in the management of children with HCV under hemodialysis, they monitor the physical status of children before, during and post dialysis. The infection control practice for HDU include no food, drink in the unit, hand washing and disinfection of dialysis equipment and blood spills, staff education about launder of scrubs, close supervision of new and inexperienced staff, proper barrier and staff personal protective equipment (*Center of Disease Control and Prevention [CDC], 2007*).

Significances of the problem was observed from clinical experience of the nursing that the nurses had lack of knowledge and practice about hepatitis C virus in children under hemodialysis which result in dangerous complications such as infection due to poor infection control practice and iatrogenic transmission of hepatitis C virus is possible when disinfection and sterilization techniques are inadequate and contaminated equipment and supplies so that the study will be conducted to assess nurses knowledge and practice regarding care to children with Hepatitis C virus under hemodialysis (*Burrel, 2005*).
