

## Abstract

# Incidence and Prevalance of Hemodialysis and Vascular Access Related Problems in a Dedicated Hemodialysis Centre

Kanda HK, Chua HL, Liew NC

Pusat Hemodialysis Mawar, Seremban, Negeri Sembilan

### Introduction:

There has been a sharp rise in hemodialysis population and there are 500 operational hemodialysis centers in our country. There is a paucity of data of the incidence of new cases and prevalence of related problems. This study was performed to find out the incidence and prevalence of hemodialysis and vascular access related problems in Pusat Hemodialysis Mawar.

### Materials and Methods:

From January 2009 – December 2010, all registered patients of Pusat Hemodialysis Mawar were retrospectively entered into a registry. The demographic data, morbidity, vascular access records were reviewed and calculated as per 1000 hemodialysis patients per year.

### Results:

Number of patients enrolled n= 271. **Demographic data:** Age: youngest patient -20 years old, oldest -98 years old, between 50-70 years -53.3%. Gender: Male -55%, Female -45%. Ethnic: Chinese-55%, Malay -25%, Indian -15%. Others -2%. **Co-morbidity:** Hypertension -98%, diabetes mellitus -70.2%, IHD -13.6%, CVA -10.7%. Mortality rate: 13.6%. **Cause of death:** ACS -34.2%, Unknown cause -27.3% , Sepsis-16.2%, Pneumonia- 5.4%, Cancer-5.4%, Upper GIT bleed-2.6% and Fluid overload- 2.6%. Prevalence of vascular access at initiation of hemodialysis : Non-cuffed non-tunneled catheter -68% (185), native fistula and PTFE graft -27%(73) and cuffed tunneled catheter -5%(14). **Prevalence of long term vascular access:** native fistula -91.2 % (248), PTFE graft -4.4 % (12) and cuffed tunneled catheter -1.8% (5). 2.65 % ( 7) patients died before construction of vascular access. **Incidence of complicated vascular access:** 123 cases per 1000 patient years, which consists of Thrombosis -79 cases per 1000 patient years, Infection - 7 cases per 1000 patient years, Stenosis -38 cases per 1000 patient years.

### Discussion & Conclusion:

Hemodialysis patients are a group of critically ill patient with multiple co-morbidities as the risk factors of developing vascular access complications and death. Creation of fistula before initiation of hemodialysis will reduce the IJC related complications. Vascular access complications will contribute to the increased mortality and socioeconomic burden.