

14TH WORLD NEPHROLOGY CONFERENCE

July 23-24, 2018 Melbourne, Australia

Study of infection related complications in renal failure patients on hemodialysis from developing countries

Punit Gupta¹, Nikita J², Gurvinder C² and Ayushi M²

¹PT.J.N.M. Medical College, India

²Dr. B.R.A.M. Hospital, India

Aims: This study was done to know the incidence of infections and sepsis in hemodialysis patients, also the risk factors and bacteria, commonly associated with CVC infection in hemodialysis patients.

Methods: We conducted a prospective study in (Nephrology unit) at Dr. B.R.A.M. Hospital Raipur in a total 100 patients. Prospective surveillance for hemodialysis catheter related blood stream infections (CRBSI) was performed in all hundred patients in whom CVC was the access. Blood culture and Maki's semi-quantitative method for catheter tip were used for processing.

Results: In the study group of a total of 100 patients, 35 patients suffered from septicemia whose blood culture was found to be positive for gram positive cocci and gram negative bacilli and they number of patients were in age group more than 45 years with male preponderance. (11%) patients suffered from urinary tract infection, 35 patients (15%) had CRBSI (Catheter related Blood Stream Infection) and 2 (2%) had pneumonia. 40% patients were diabetic. 92% cases in our study group with sepsis had moderate anemia (<11gm%). Gram positive cocci (*Staphylococcus aureus*) was most common organism found in blood of 80% patients of renal failure on haemodialysis with sepsis and *E.coli*, *Acinetobacter* and *Candida* was found 6.66%, 6.67%, 6.67% respectively. Incidence of sepsis was high with femoral vein (66.67%) usage and prolonged hemodialysis. Serum Phosphorus level was high in 73.33% patients and CRP was raised in all 15 patients with sepsis. Hypoalbuminemia (Serum Albumin level < 3.4 gm/dl) was associated with sepsis in 60% cases. Most of the patients were euthyroid.

Conclusion: As incidence of renal failure requiring hemodialysis increases and accordingly use of vascular access to deliver haemodialysis therapy has increased. The patient requiring haemodialysis are prone to infections because of risk factors like advanced age, male sex, diabetes, anemia, hypoalbuminemia, hyperphosphatemia and prolonged duration of hemodialysis. The site of vascular access is an important risk factor for development of sepsis. Gram positive cocci (*S. aureus*) is the commonest cause of sepsis. Prevention of CRBSI by encouraging AV Fistula, minimizing the use of CVCs, use of preventive measures for *S. aureus* carriers and aggressive management of hyperphosphatemia with phosphate binding agents can reduce incidence of CRBSI.

Biography

Punit Gupta is MBBS, MD (Medicine), DM (Nephrology) and PhD. He is the Honorary Nephrologists to the Governor of Chhattisgarh State since 2009. He is Chairman and Members of many important academic and management committees of various Government Medical Institutions in the country and the Pt. Deen Dayal Upadhyay Health Sciences University, Raipur. He was awarded Certificate of Excellence awards by the Times of India groups 2016. His work was appreciated with certificate of appreciation by Indian Dietician Association 2016. He was felicitated by Agrasen Agrawal Samaj for his excellent work in Tribal Population 2016. He was honoured with excellence award by 'Z' TV Chhattisgarh for this distinguish work in kidney disease in rural population of Chhattisgarh in 2017. He has developed a concept of Teledialysis, first of its kind in Asia. He has developed Portable dialysis Machine (MAKE-D) for 60 billion kidney patients in world who require dialysis many times in a week. He has developed an abdominal Pressure Measurement Scale, which is very useful of Continuous Ambulatory Peritoneal Dialysis Patients (type of dialysis). He has developed and economic, efficient and effective walkie talkie system for consultation and directions to the hospital staff and doctors. He has been awarded Dr. B. C. Roy National Award for his research to give Aid or Assistance to Research Project for the year 2016.

punit282004@yahoo.co.in