Microorganisms and outcome of peritonitis in patients undergoing Peritoneal Dialysis (PD): Results from peritoneal dialysis peritonitis study in India

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Introduction & Aims: PD is being practiced by most nephrology centers of India. Steadily there has been a decrease in PD associated peritonitis over the last few years. No multicentric study has been conducted in India to relate microorganisms with outcome of PD peritonitis

Methods: This was a prospective, multi-center (21 centers), uncontrolled, non-randomized, open-label, and observational study. Patients with an episode of peritonitis who took no antibiotics in past 7 days were enrolled from April 2010 to December 2011. There was no uniformity ensured and maintained in methods of PD fluid collection, culture technique adopted and the culture medium used in the center. 244 incident and prevalent PD patients (mean age of 54.30 yrs, SD 13.10 yrs, median 52.34 yrs) were included in the study.

Results: Out of the 244 PD effluent samples, only 85 samples (34.8%) were culture positive for microorganisms. 5 patients had recurrent peritonitis. 47.78% Gram negative, 36.67% Gram positive organisms, 13.33% fungal and 2.22% Mycobacterium tuberculosis was isolated. Escherichia coli (20.0%) and Coagulase negative Staphylococci (17.77%) were most commonly cultured organisms. Among Gram negative, Klebsiella pneumoniae and Pseudomonas species caused most peritonitis episodes while, Coagulase negative staphylococci and Staphylococcus aureus were responsible for most episodes among gram positive organisms. Death rates were highest with Escherichia coli and Staphylococcus aureus (27 & 18.1% respectively). The hospitalization rate was again high in patients with Escherichia coli peritonitis (19.6%).

Conclusions: This present study recorded a low culture positivity rate (34.75%). Gram negative peritonitis was more common. Patients with Escherichia coli suffered most deaths and hospitalization. The culture technique involving inoculation of sediment (after centrifugation) from the whole bag sample and automated culture system gave the highest isolation rate.

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Psychological care of dialysis patients

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One of the main issues in treatment and care of dialysis patients is the subject of psychopathology. The dialysis patients suffer from major psychological problems such as anxiety, depression, anger and that negatively affected the recovery process. In this study, the role of psychosocial factors, especially depression and anxiety at the development, persistence and worsening of the disease in dialysis patients is discussed. As well as the role of psychological interventions such as psychosocial rehabilitation programs, psycho-educational programs, cognitive behavioral therapy and family-based treatment in reducing psychological problems of dialysis patients is studied. In addition the role of health psychologists (those who apply the knowledge and skills of psychology in the prevention and treatment of medical chronic illness) in the health care system and their help to nephrologists and other therapeutic agents in the treatment and care of dialysis patients will be discussed. The results of research conducted in this area are reported.

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