

THE DEVELOPMENT OF A PERITONITIS RISK ASSESSMENT TOOL.

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PROBLEM: Peritonitis is the most serious complication of peritoneal dialysis and causes 30-50% of technical failure, Renal Association, 2001. Despite advances in connectology and “flush before fill”, Daly et al , 2000, it remains the Achilles heel of PD therapy. Although a number of risk factors have been identified from various studies and literature reviews, there appears to be limited information on the holistic assessment of individual patients in terms of their risk of developing peritonitis.

PURPOSE: To determine the feasibility and benefit of developing a risk assessment tool that could be used proactively by nurses and physicians to A) Identify the risk level of patients developing peritonitis, and B) Implement appropriate interventions to reduce the risk of peritonitis.

DESIGN: Current practice was collated using a multi-centre approach (6 centres). Following an extensive literature review and consensus of opinion from our expert panel of senior PD nurses, eight categories were identified for inclusion in the risk factor assessment tool. Dexterity, mobility, vision, environment, adherence, cognition, social and clinical categories were selected to represent the physical, clinical and psycho-social factors to be included. Each category had an appropriate strategy of intervention assigned to it. A scoring system was devised which enabled patients to be identified as low, medium or high risk and appropriate strategies of interventions were recorded. High risk scores included poor dexterity/vision, previous infections and compliance.

Following an initial pilot of the tool, a twelve month retrospective audit was conducted. The tool was completed on 414 patients currently on PD therapy, totalling 5068 patient months. Additional information pertaining to the number of infection episodes, demographic data, modality, number of home visits and number of in-patient episodes was collated concurrently, in order to evaluate the risk categories of the tool.

FINDINGS: Initial findings are represented in the table below. More detailed analysis is currently being undertaken.

Risk category	No. of patients	One episode of peritonitis	Two episodes of peritonitis	Three episodes of peritonitis	Four episodes of peritonitis	Total episodes of peritonitis
High	61 (15%)	15 (25%)	5 (8%)	5 (8%)	2 (3%)	27 (44%)
Medium	162 (39%)	37 (23%)	14 (9%)	2 (1%)	0	53 (33%)
Low	191 (46%)	17 (9%)	9 (5%)	0	0	26 (14%)

CONCLUSION: Initial findings appear to demonstrate a strong link between the risk category and the number of peritonitis episodes the patient has experienced. Further analysis will examine significant correlations between risk categories and additional data collected.

RELEVANCE: The physical, psychosocial and clinical factors which may contribute to a patient developing peritonitis, have never been formally identified by any tool. It is envisaged that this tool can be used in clinical practice to assess those patients most at risk of developing peritonitis. If a patient's score falls within a high risk category, planned interventions may subsequently reduce that risk. The long-term effects of identifying this patient group could have significant implications for clinical practice, modality choice and length of time on peritoneal dialysis. A prospective study is to be undertaken to continue to endorse the initial findings, monitor the effectiveness of the tool and investigate the use of the tool for assessment of pre-dialysis patients.