

EXPLORING END STAGE RENAL DISEASE PATIENTS' BELIEFS ABOUT PHOSPHATE BINDING MEDICATION AND INTERVENING TO IMPROVE THEIR ADHERENCE.

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Title: Exploring end stage renal disease patients' beliefs about phosphate binding medication and intervening to improve their adherence.

Background: The incidence of non-adherence to treatment extends from 30 to 50% constitutes a major problem (Christensen et al, 1997). More specifically, persistent hyperphosphatemia in the face of normal serum calcium appears to be a common cause of metastatic calcification leading to cardiovascular diseases, most common cause of death in ESRD patients (Stone & Rabin, 1983). Based on the results of our pilot qualitative study the key beliefs associated with patients' adherence behavior regarding phosphate-binding medication were identified.

Aim: To evaluate a novel intervention designed to improve patients' understanding of the way phosphate-binding medication works and evaluate whether this improves medication adherence, increases knowledge, changes attitudes or risk perceptions.

Hypotheses: 1) Patients' beliefs about the efficacy and necessity of phosphate binding medication will strengthen after the intervention. 2) Patients who have followed the intervention program will show a reduction in serum phosphate levels, will show an increase in knowledge regarding phosphate level management in comparison with the control group.

Sample: 40 patients were included in this study, twenty intervention and twenty controls. Power calculation for this sample size was indicated it sufficient to show a 30% effect in outcome measures after the completion of the intervention. Design: The study followed a randomized design, in which patients were randomly allocated to receive either intervention or treatment as usual.

Procedure: A short psycho educational intervention was performed, consisting of a coherent explanation of how phosphate-binding medication works and its correct use as well as modification of patients' misconceptions. A demonstration was performed of a phosphate binder binding a phosphate solution in a transparent plastic container shaped like a stomach. Patients were also taken through a personalized leaflet with information about phosphate, adverse effects of high phosphate, level control and efficient medication use. Pre and post questionnaires assessing level of knowledge, patients' beliefs about their phosphate binders, self-report medication adherence and personal vulnerability and risk perception were administered.

Serum phosphate levels and other outcome measures such as patients' satisfaction with information regarding this treatment and understanding of the nature of treatment will be obtained for a three month follow up. These will be compared with the baseline measures previously recorded and contrasted to measures taken from the control group so that the effect of the intervention can be evaluated.

Discussion: A psycho educational intervention assisting patients to develop adaptive models of their treatment and encouraging active participation and self-efficacy may produce significant health outcome benefits. Effects such as increased knowledge about phosphate level management and phosphate-binding medication can reduce perceived helplessness and future non-adherent behaviour. Patients whose sense of control is somewhat restored, may construe a more positive meaning from the treatment experience having a significant on their mood and quality of life.