

Poor sleep quality, depression and social support are determinants of serum phosphate level among hemodialysis patients in Malaysia

ABSTRACT

Despite optimal control of serum phosphate level being imperative to avoid undesirable health outcomes, hyperphosphataemia is a highly prevalent mineral abnormality among the dialysis population. This study aimed to determine factors associated with hyperphosphatemia among hemodialysis patients in Malaysia. Multiple linear regression analysis was used to ascertain the possible factors that influence serum phosphate levels. A total of 217 hemodialysis patients were recruited. Hyperphosphatemia was prevalent. Only approximately 25% of the patients were aware that optimal control of hyperphosphatemia requires the combined effort of phosphate binder medication therapy, dietary restriction, and dialysis prescription. The presence of diabetes mellitus may affect serum phosphate levels, complicating dietary phosphorus management. Patients who were less depressive portrayed higher serum phosphate levels, implying intentional non-compliance. Better compliance on phosphate binder, longer sleep duration, and higher social support was associated with a lower level of serum phosphate. Despite sleep disturbance being one of the most prevalent and intense symptom burdens identified by hemodialysis patients, relatively few studies have addressed this issue. It is time to formulate sleep therapeutic interventions besides the encouragement of strong social support, hoping which many clinical outcomes including hyperphosphatemia can be better controlled among hemodialysis patients.

Keyword: Hyperphosphatemia; Sleep duration; Expression; Social support; Hemodialysis patients