ABSTRACT

Background: Bone mineral disorder usually found in patients with Chronic Kidney Disease (CKD), characterized by elevated levels of serum phosphate, decreased levels of serum calcium and accompanied by an increase in parathyroid hormone. Haemoperfusion effectively remove or large-medium sized molecules but does not effectively remove small molecule toxins, phosphate and parathyroid hormone including medium-large molecular size, therefore, be a combination of hemodialysis / haemoperfusion. Kidney Disease Outcomes Quality Initiative (KDOQI) recommend the assessment of bone mineral disorder in regular hemodialysis patients to assess serum calcium, serum phosphorus, and parathyroid hormone.

Tujuan: To determine the correlation of the combination of HD / HP with bone mineral disorder in regular hemodialysis patients.

Method: This prospective cohort study from December 2013 until March 2014 against regular hemodialysis patients and performed anamnesis, and examination of serum calcium, serum phosphorus, and parathyroid hormone.

Result: From 20 subjects who were observed and 1 subject out of the study. serum phosphate obtained before the study 7.80 ± 2.47 mg / dl and after 6.98 ± 2.94 mg / dl obtained serum phosphate levels decrease as expected, but not statistically significant, parathyroid hormone before 524.20 ± 493.18 pg / ml, parathyroid hormone after 630.75 ± 666.08 pg / ml which was not statistically significant. When differentiated based on etiology of CKD and longer HD obtained significant results in parathyroid hormone levels based on the longer HD which regular HD patients more than 5 years after combination is higher than patients less than 5 years (1315.03 ± 612.68 vs 502.45 ± 609.21; p = 0.049).

Conclusion: By a combination HD / HP there is a decreased in serum phosphate levels after HD / HP, and increased parathyroid hormone levels after action HD / HP but statistically not significant.

Key word: Hemodialysis, haemoperfusion, Bone Mineral Disorders, serum calcium, serum phosphorus, serum parathyroid hormone.