

HYPERPHOSPHATEMIA IN HAEMODIALYSIS PATIENTS: THE IMPORTANCE OF NUTRITIONAL EDUCATION

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BACKGROUND

The correct control of hyperphosphoremia is one of the most important objectives to be pursued in the management of patients in hemodialysis and depends on several factors: diet, adherence to therapy and dialysis. Poor adherence to therapy is a widely recognized problem in the daily care of dialysis patients (1).

The hyperphosphatemia increases the risk of cardiovascular morbidity and mortality, for many evidence high levels of phosphorus increase in ROS. The presence of ROS promotes process of differentiation in osteoblasts of the arterial wall cells (smooth muscle cells, pericytes) so develop more vascular calcification (2).

Our patients eat lots of foods containing phosphorus as additive so an excessive dietary intake determines an intestinal resorption superior to dialysis removal (3).

The study aims to assess what the knowledge of our patients about hyperphosphoremia; what are the risks associated; what medications taken and how is possible through nutritional counseling to obtain a satisfactory phosphorus control also reducing the use of phosphate binders.

METHODS

We selected 88 patients in conventional diffusive hemodialysis treatment (4 hours) at our center at least 6 months with phosphorus levels above mean 1.7 mmol/l and treated with phosphate binders.

To assess knowledge about the phosphate content in the foods and the importance of binders therapy, during hemodialysis session every patient received a questionnaire of 10 simple multiple-choice questions (5 questions about diet, 2 questions about risk of hyperphosphoremia and 3 questions about phosphate binders) and then each patient received explained tables of phosphorus content in various foods.

After the doctor and nurses performed an interview with patient and his family member or caregiver about the risks of hyperphosphoremia, the importance of low phosphorus diet and adherence at the therapy.

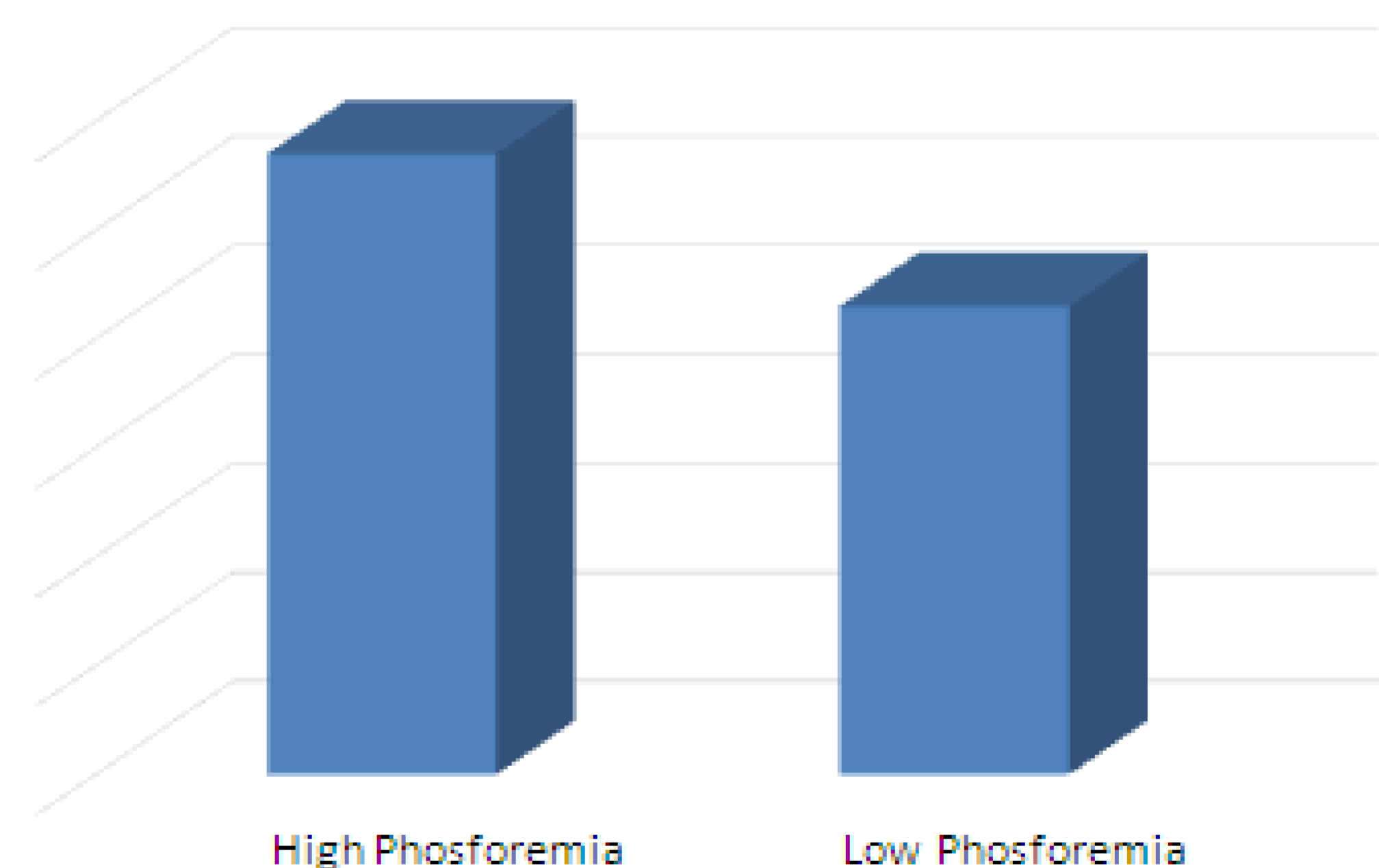
Then we evaluated the levels of phosphorus at one month and six months as indexes of dietary adequacy and compliance therapy.

RESULTS

Our investigation highlights the low compliance to phosphate binders therapy is cause of not optimal control of phosphorus in hemodialysis patients (the 65% of interviewed patients do not take the therapy).

Patients do not understand the complications related to high serum phosphorus values so there are a low adherence to dietary and drug prescriptions (70% of patients answered hyperphosphoremia is not a major problem) and 74% of patients do not know the foods with the lower phosphorus content. After patients education we observed a significant decreased phosphorus level in sixth month (mean-0.5 mmol/l $p < 0.05$) in 43% patients.

Lowering phosphoremia after counseling



CONCLUSIONS

For an adequate phosphorus control is required counseling diet to explain foods containing additives and high phosphate. To improve the compliance to therapy should make the patient aware of their disease, to inform and educate about the risks related to hyperphosphoremia that remains an important task of the Nephrologist (4).

Patient only through a training course becomes an active part in the care process with his care giver.

BIBLIOGRAPHY

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What does your patient know about Phosphorus ?

Higher Dietary Phosphorus

■ Male ■ Female

