SOCIO-ECONOMIC FACTORS, FOOD HABITS AND PHOSPHORUS LEVELS IN PATIENTS ON HEMODIALYSIS

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OBJECTIVES

Hyperphosphoremia is common in Chronic kidney disease (CKD) and is one of the most important risk factors for morbidity and mortality not only for CKD but also for general population. [1] A recent metanalysis demonstrated an association between death and higher serum level of phosphorus irrespective of the stage of CKD. [2] Excessive dietary intake of phosphate (P) is one of the key factors. In particular, P in its inorganic form, which is contained in food additives, is more readily absorbed. Unfortunately, these food additives are mostly present in convenience fast foods, soft drinks, which is the typical food consumed by our hemodialysis population, composed by elderly people, mostly low-socio economic class, who often live alone.
We want explored association between socio-economic factors and serum phosphorus levels.

METHODS

We enrolled 100 patients (50 males and 50 females mean age 62.9   11) on periodic hemodialysis treatment from 3 different units. Information, on social, cultural, economic, diet habits, therapy for hyperphosphoremia had been collected through specific questionnaires administered by a physician. Results obtained from questionnaires were correlated with haematological and clinical parameters. Statistical analysis was performed using correlation between variables with the linear regression analysis, and the stepwise logistic regression analysis, either analysis preceded by log-10 transformation if the distribution of the variables was non-gaussian. The level of statistical significance was always set at P o 0.05.
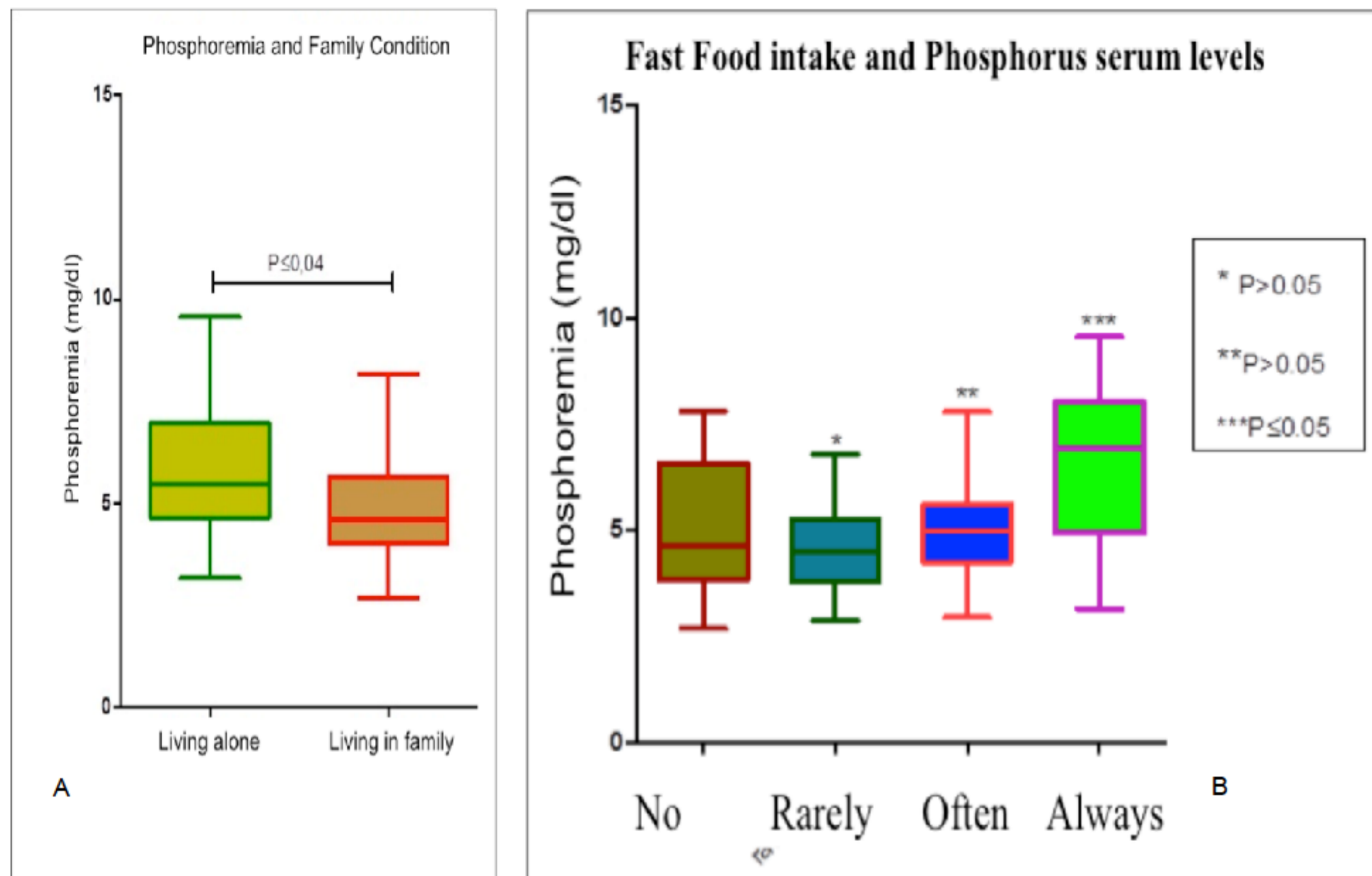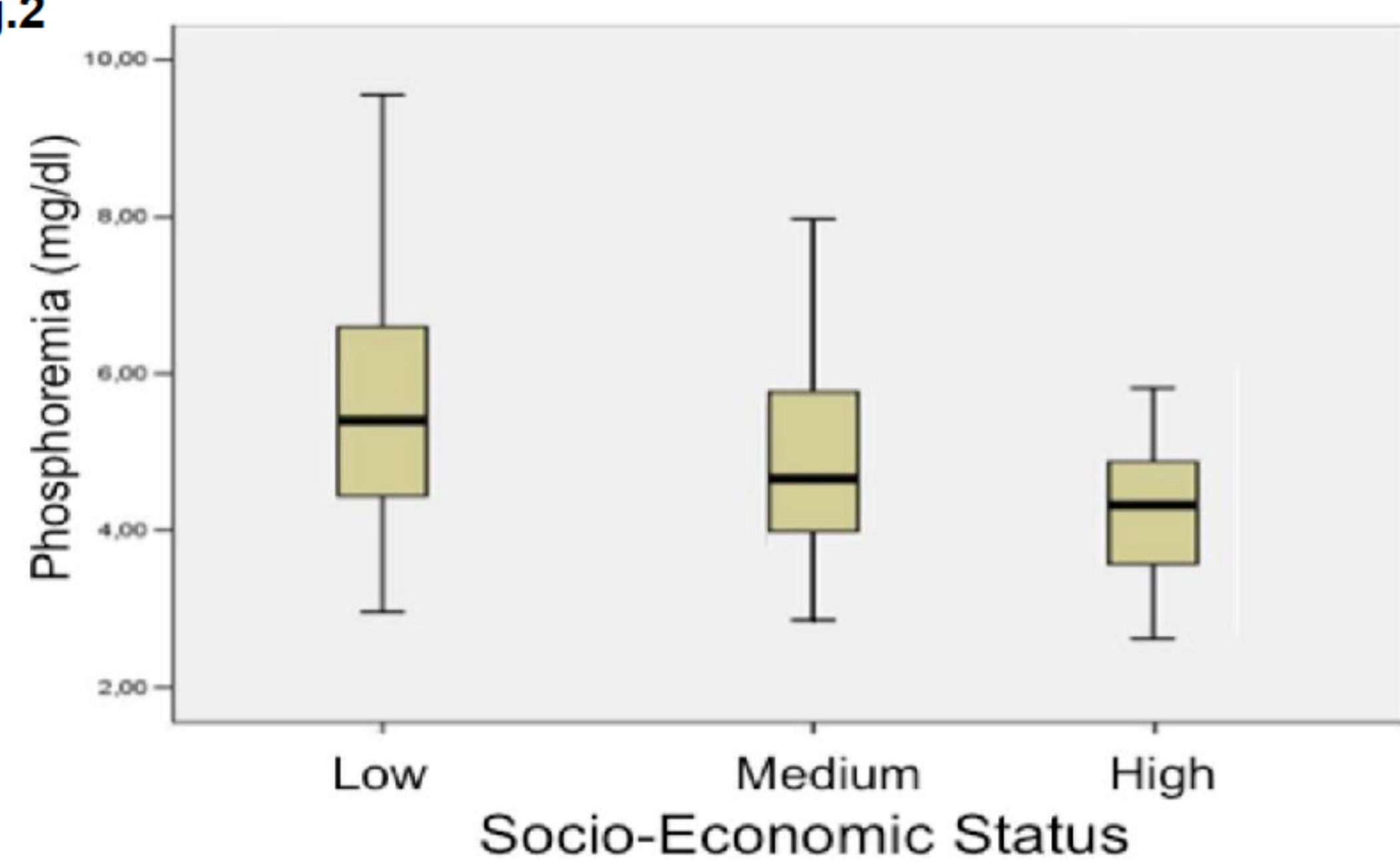

Fig. 1

Fig.2

RESULTS

Serum phosphorus level was higer in patients who lives alone compared to patients in family (p=0.04) and in self-sufficient (p=0.05) (Fig.1A). Conversely phosphoremia was reduced in patients belonging to medium-higher versus lower socio-economic groups (p=0.003) (Fig.1B). Fast foods intakes correlates with increase in phosphorus serum levels (p=0.002) (Fig.2 and table 1), whilst the same correlation was not found for cheese.

TABLE 1	
PHOSPHOREMIA AND FAST FOODS INTAKES	P=0,002
PHOSPHOREMIA AND CHEESE INTAKES	P=0,09

CONCLUSIONS

Our data show that socio-economic status and food habits are useful predictors of phosphorus serum levels. Dietary counselling of patients on hemodialysis is mandatory. Interventions that consider a socio-economic situation allowed to deliver the most important message on foods with the least amount of phosphates, and adequate protein content, may be a successful strategy in targeting patients at higher risk of hyperphosphoremia.

References

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