



Serum Phosphate as a Risk Factor for Cardiovascular Events in People with Chronic Kidney Disease

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Introduction

Serum phosphate is a known risk factor for cardiovascular events and mortality in people with chronic kidney disease (CKD), however data on the association of these outcomes with serum phosphate are scarce. We investigate this relationship in people with CKD admitted to Dept of Nephrology and organ transplantation, Sharda superspecialty hospital, Delhi ncr

Material & Methods: Observational data suggest that an elevated serum phosphate increases the risk of cardiovascular events and mortality in patients with chronic kidney disease (CKD). Furthermore, hypophosphatemia is associated with reduced cardiovascular events in people with CKD. A 55 patients with Chronic Kidney Disease admitted in Nephrology Unit were studied. All patients were subjected to all routine investigations including Complete Blood Count, Blood Sugar, RFT & electrolytes and other relevant tests.

Results

- Mean Age of the patients was 49.5 + 8.5 years.
- 69.3% patients were males and 30.7% patients were females.
- Stage wise distribution of patients in stage I, II, IIIa, IIIb, IV, and V was nil, 3.6%, 3.6%, 1.8%, 9.09% & 81.1% respectively
- 30.9% of the studied patients were having ckd due to diabetic kidney disease.
- 81.8% of the patients were on maintenance hemodialysis in our study.
- Number of patients with raised serum po4 (more than 4.5mg/dl) is 67.27% and low serum po4 were 5.4% (less than 2.5mg/dl).
- Total number of Patients with raised serum p04 with cardiac abnormalities were seen 27.27%

- 5.4% Patients of ckd with low serum p04 had no cardiac abnormalities.
- Patients with raised serum p04 with cardiac abnormalities were seen from Ckd stage stage 4 i.e 5.4%, and ckd stage 5 patients were 35.13%.
- Patients with dkd/ckd 29.4% of patient had positive correlation with raised po4 level and cardiac abnormality.

Conclusions

Other study confirms these findings. It also is in agreement with previous findings that hyperphosphatemia is associated with increased cardiovascular risk in people with CKD. In people with CKD, phosphate below the normal range has been associated with both improved and worsened cardiovascular outcomes. We found no effect of low phosphate on cardiovascular outcomes in the CKD population. Further research is required to determine the mechanisms. Further research is required to determine the mechanisms underlying these associations

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