

INTRODUCTION

Maintaining serum phosphorus can be difficult for hemodialysis (HD) patients even with dietary counseling and oral phosphorus binder therapy. Through observation in both of our clinics, we noted that patients on the non-calcium binder lanthanum carbonate experienced better phosphorus control than other non-calcium resin based binders.

To determine if lanthanum carbonate helped patients within our clinic maintain phosphorus with KDOQI guidelines of 3.5-5.5 mg/dL, we assessed phosphorus, calcium, PTH and albumin levels in patients starting on lanthanum carbonate between January 2009 and December 2009.

METHODOLOGY

- 33 patients (Table 1) who either switched to lanthanum carbonate from:
 - a non-calcium resin based binder (n=14) or
 - calcium-based binder (n=5) or
 - who started on a phosphate binder for the first time (n=14) were included in the study
- The last lab values prior to the switch to lanthanum carbonate (baseline) were compared to lab values 2 months after starting on lanthanum carbonate

RESULTS

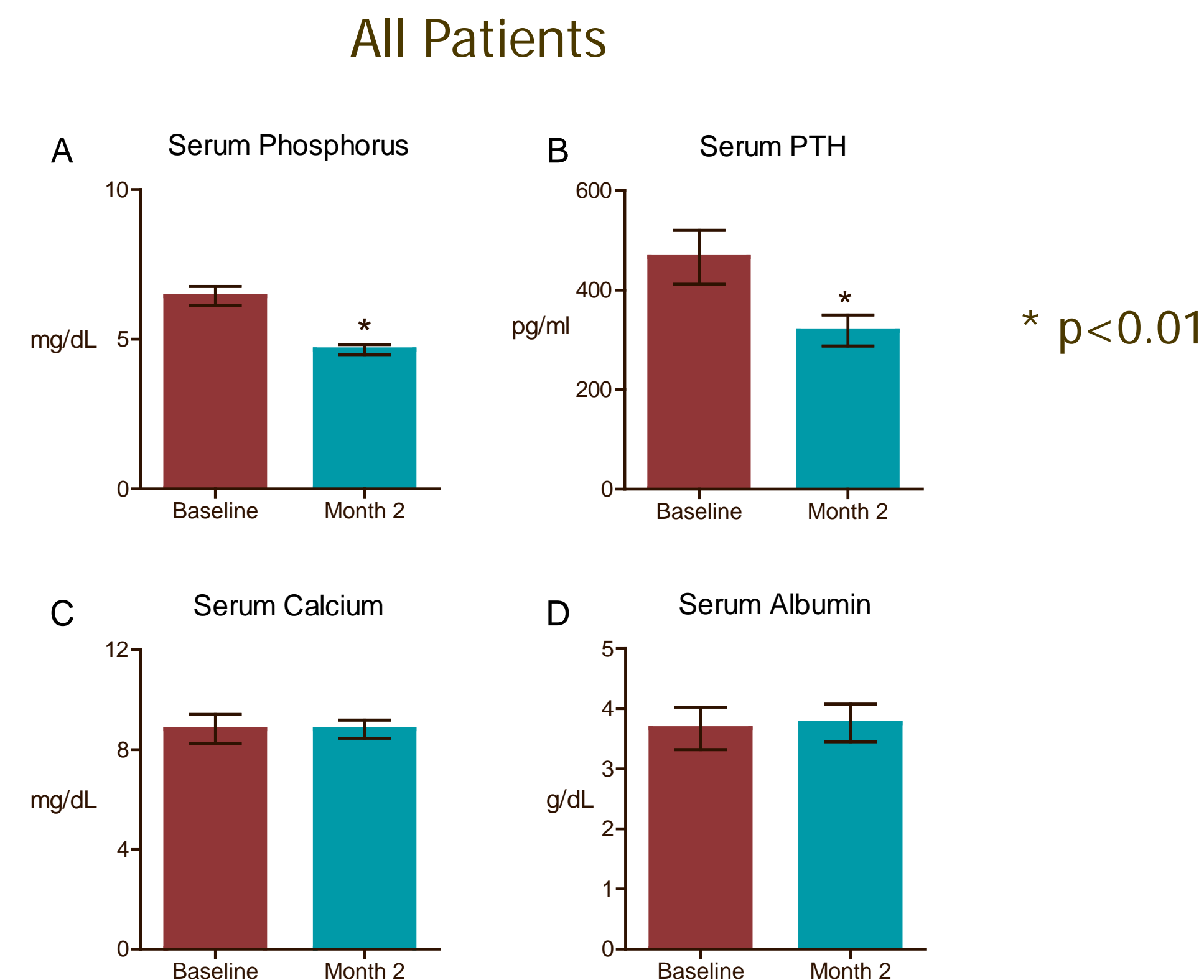


Figure 1. Mineral and Bone Metabolism Markers at Baseline and After Two Months on Lanthanum Carbonate

Table 1. Patient Demographics

	N=33
% Female	52
Age (mean ± SEM)	59 ± 3
Time on Dialysis (mean ± SEM)	2 ± 0.4 yrs
% Diabetic	58
% Caucasian	21
% African American	73
% Hispanic	3

Only Patients who Switched from a Non-Calcium, Resin-Based Binder

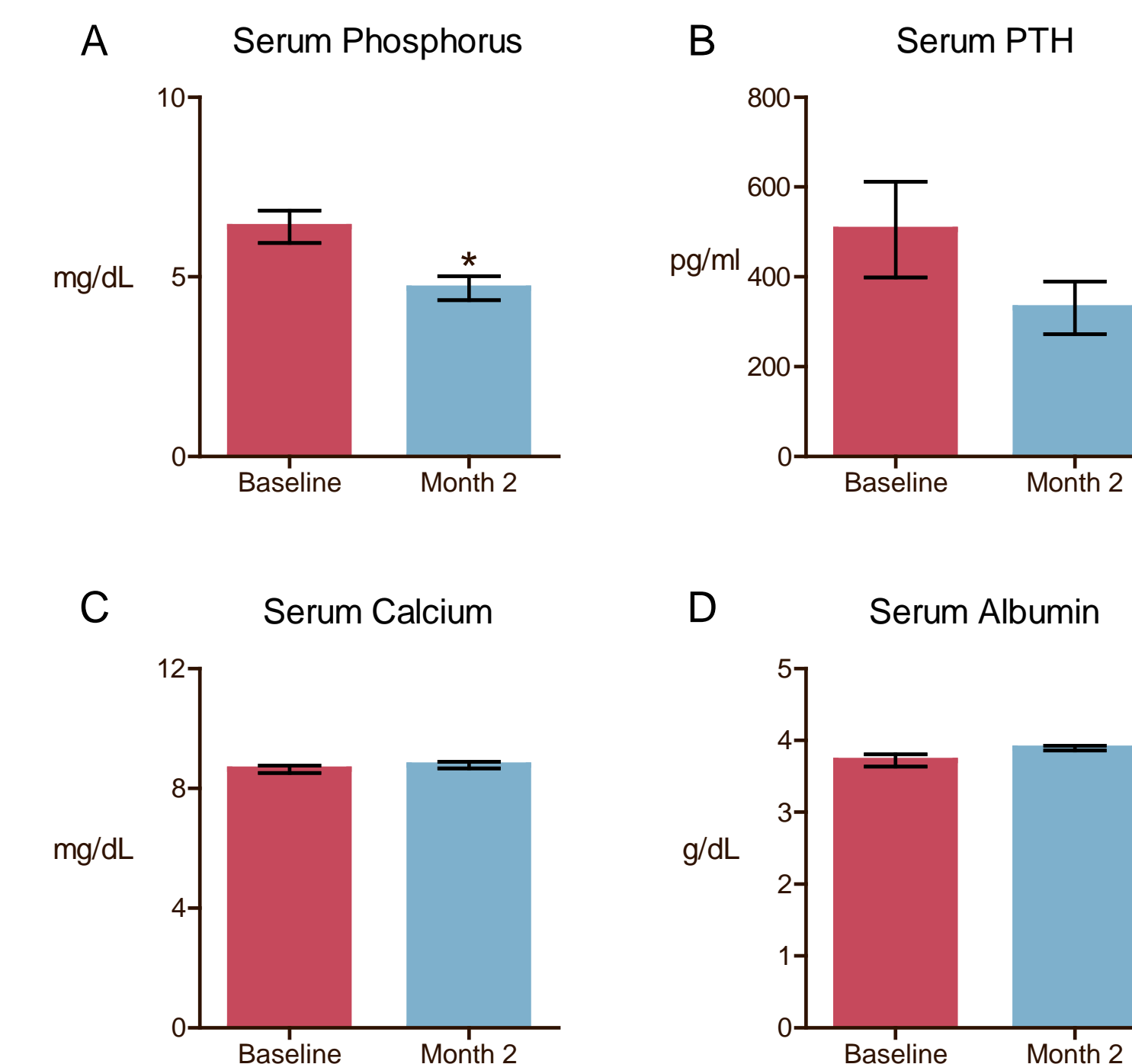


Figure 2. Mineral and Bone Metabolism Markers at Baseline and After Two Months on Lanthanum Carbonate

Patients Achieving KDOQI Phosphorus Guidelines

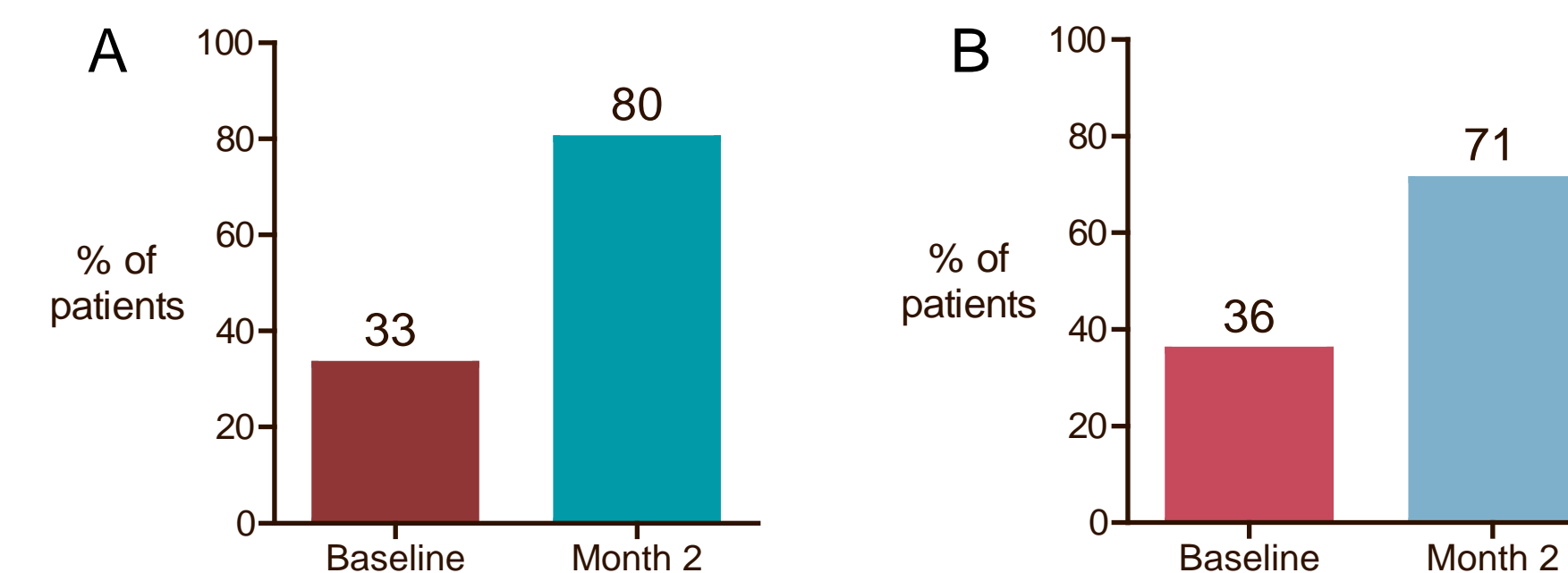


Figure 3. All Patients (A) and Only Patients Switched from a Non-Calcium, Rein-Based Binder (B) Achieving KDOQI Phosphorus Guidelines

CONCLUSIONS

- The mean phosphorus levels decreased from baseline levels of 6.4 ± 1.8 mg/dL to 4.7 ± 1.0 mg/dL ($p < 0.001$) after 2 months on lanthanum carbonate (Fig. 1A). PTH also decreased significantly (Fig. 1B).
- After 2 months on lanthanum carbonate, the percent of patients meeting KDOQI guidelines increased from a baseline of 33% to 80% (Fig. 3A).
- Comparing only patients who switched from a resin-based binder to lanthanum carbonate, serum phosphorus decreased (Fig. 2A) and a greater percent of patients were within KDOQI phosphorus guidelines (Fig. 3B) after 2 months on lanthanum carbonate.
- Calcium and albumin did not change significantly for either comparison.

KEY LEARNINGS

- ✓ Within both of our clinics, the type of phosphate binder positively affected phosphorus levels but calcium and albumin levels were unchanged.
- ✓ These findings should be confirmed in a prospective, randomized, controlled trial.

We thank the patients who participated in this study and DaVita Clinical Research® for support in preparing this poster. DCR is committed to advancing the knowledge and practice of kidney care.

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