EVALUATING ADHERENCE TO CALCIUM CARBONATE EMULSION (CCE) VERSUS CALCIUM CARBONATE TABLETS (CCT) FOR THE TREATMENT OF HYPERPHOSPHATEMIA IN PATIENTS ON CHRONIC HEMODIALYSIS

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OBJECTIVES

Hyperphosphatemia is directly related to mortality in hemodialysis patients. Calcium carbonate produces digestive intolerance often leading to poor adherence to treatment.

Various commercial presentations achieve greater or lesser tolerance and adherence.

We evaluated adherence to Carbonate Calcium Emulsion (Pluscal®) for the treatment of hyperphosphatemia in hemodialysis patients as compared to Calcium Carbonate Tablets.

METHODS

We conducted a phase IV, longitudinal, prospective, controlled, randomized, crossover, open label, multicentric study. Patients with at least 90 days on hemodialysis and hyperphosphatemia (defined as Serum Phosphate > 5 mg/dl) were included.

After signing informed consent, subjects were randomized into two groups. In Group 1 patients received intervention A (Calcium Carbonate Tablets) during first stage and intervention B (Calcium Carbonate Emulsion) during second stage.

In Group 2 received intervention B (CCE) during first stage and intervention A (CCT) during second stage. Monthly laboratory controls were performed during the study.

Treatment adherence was assessed using Morisky-Green Questionnaire (adapted to Spanish by Val Jimenez et al). Patients were classified as adherent or non-adherent. A question was added to identify the cause of nonadherence.

These questionnaires were completed by the patient after intervention A, and after intervention B.

RESULTS

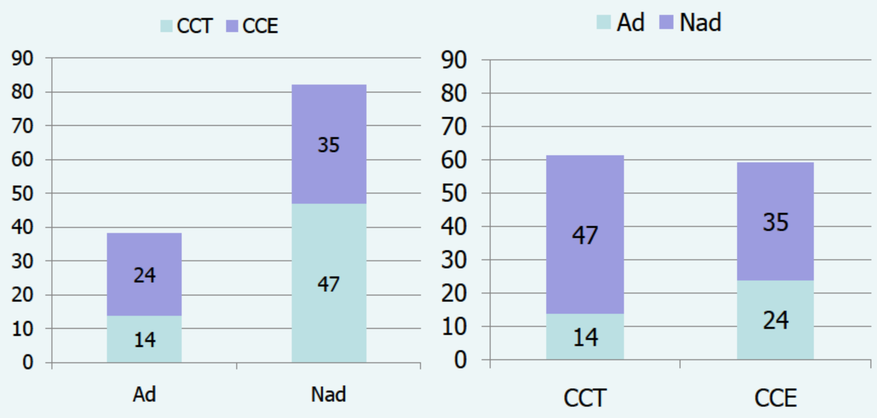
From 416 eligible patients, 102 met the inclusion criteria. Sixtyfive patients (64%) completed the study and a total of 120 questionnaires were completed: 61 (51%) receiving CCT and 59 (49%) receiving CCE.

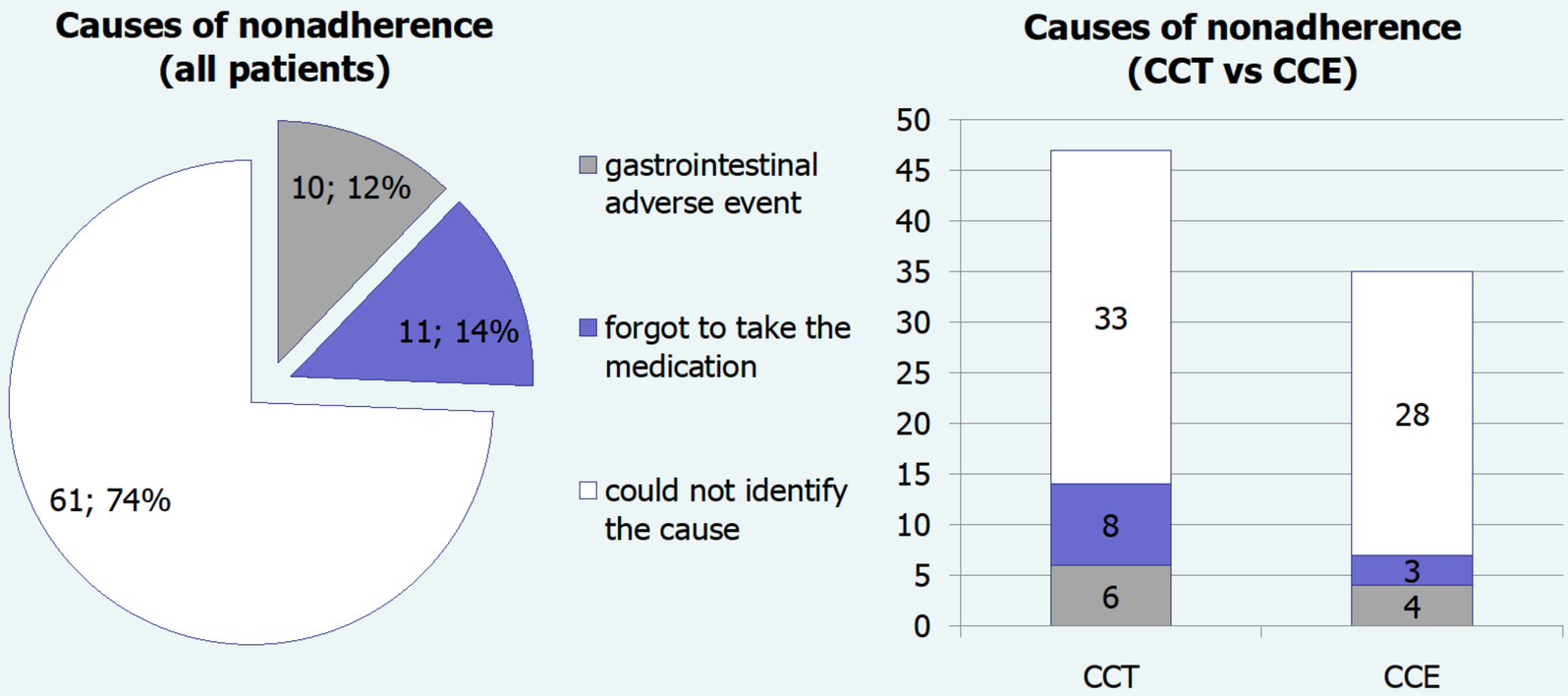
Patients were classified into Adherents (Ad) and Non Adherent (NAd) for each intervention (A and B) according to Morisky-Green test (see table).

For Morisky-Green test, the number of adherent patients was higher in the group receiving CCE (p 0,037).

Of 82 patients identified as NAd (68,3%), 74% could not identify the cause, 14% forgot to take the medication and 12% presented gastrointestinal adverse events.

Product	Morinsky-Green Test	
	Ad	NAd
CCT	23% (14)	77% (47)
CCE	40% (24)	60% (35)





CONCLUSIONS

1. Adherence to treatment with Calcium Carbonate Emulsion (Pluscal®) was higher than adherence to treatment with CCT (40% vs 23%).
2. Calcium Carbonate Emulsion and also Calcium Carbonate Tablets showed a high rate of NAd as calciumbased phosphate binders (68,3%).
3. While there is no specific reasons for NAd, CCE seems to show less gastrointestinal adverse events and forgetfulness in taking medication.
4. Calcium Carbonate Emulsion (Pluscal®) can be a good therapeutic alternative in patients with poor adherence to Calcium Carbonate Tablets.

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