

# COMBINED THERAPY OF SECONDARY HYPERPARATHYROIDISM IN HEMODIALYSIS PATIENTS

Authors: Vakhitova Renata, Damotsev Vladimir

Emergency Hospital № 2 , Kazan, Tatarstan, Russian Federation



## Objectives:

Mineral and bone disorders associated with the development and progression of secondary hyperparathyroidism are often observed in hemodialysis patients. Its manifestations can significantly impair quality of life of these patients.

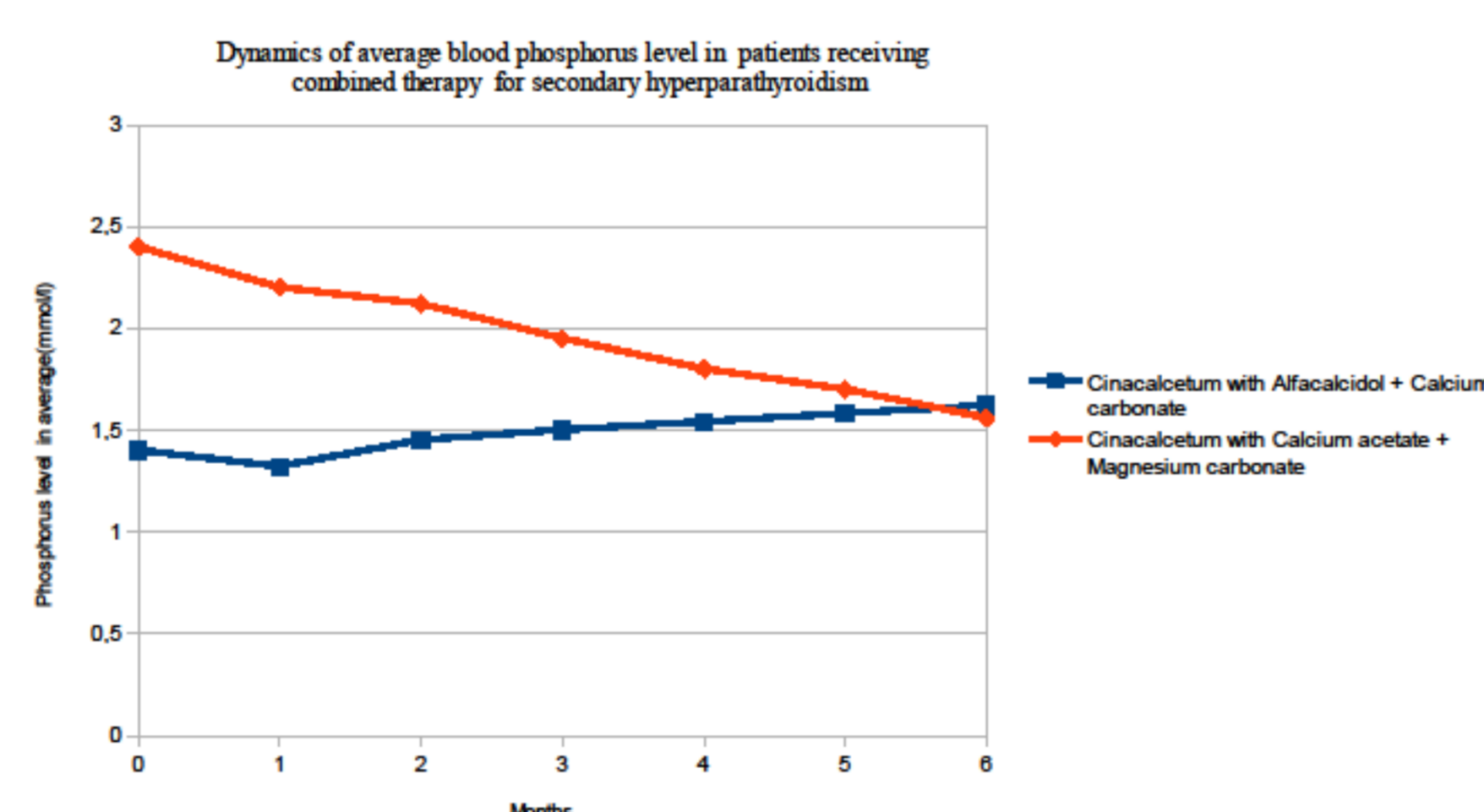
Objectives: To evaluate the effect of combination Cinacalcetum with Calcium acetate + Magnesium carbonate or Cinacalcetum with Alfacalcidol + Calcium carbonate to reduce some manifestations of hyperparathyroidism in hemodialysis patients undergoing continuous renal replacement therapy.

## Methods:

37 patients with stage 5D chronic kidney disease with symptoms of secondary hyperparathyroidism (iPTH level of 300 pg / ml) were involved in the study. All patients underwent the dynamics determination of the level of intact parathyroid hormone (iPTH) by immunochemiluminiscent analysis method, conducted standard general and biochemical study of blood serum. All patients received adequate hemodialysis (with  $Kt / v$  more than 1.6), not less than 12 hours per week. The patients followed a diet with a low phosphorus content in food. 19 people were treated with Cinacalcetum in combination with Alfacalcidol + Calcium carbonate of at least for 6 months in medium effective dose. 18 people were treated with Cinacalcetum plus Calcium acetate + Magnesium carbonate at least 6 months also in medium effective dose. The patients were interviewed by the proposed standard questionnaire to assess the presence and severity of pain, skin itch, assessment of general health in the dynamic.

## Results:

iPTH levels ranged from 384 to 2452 pg / ml before treatment. The study in both groups iPTH reduced in all patients (in average of 32%) during 6 month therapy. Treatment with combination of Cinacalcetum with Alfacalcidol + Calcium carbonate remained a tendency to increased blood phosphorus. During the treatment with Cinacalcetum and Calcium acetate plus Magnesium carbonate phosphorus level in the blood was reduced by an average of 0.8 mmol / l for 6 months. Pain syndrome decreased in 45% of patients in both groups. Most positive changes to improve the overall health and reduce pruritus was observed in patients treated with combination of Cinacalcetum and Calcium acetate plus Magnesium carbonate.



### Dynamics of symptoms:

	Cinacalcetum with Alfacalcidol + Calcium carbonate (n=19)		Cinacalcetum with Calcium acetate + Magnesium carbonate (n=18)	
	At the beginning of treatment	In 6 months	At the beginning of treatment	In 6 months
Pain (5 point scale)	3.6 (±0.8)	2.4 (±0.7)	3.4 (±0.79)	2.5 (±0.8)
Skin itch (5 point scale)	1.5 (±0.4)	1.6 (±0.3)	2.6 (±0.6)	1.5 (±0.5)
Gen. health (5 point scale)	3.4 (±0.2)	3.6 (±0.3)	3.4 (±0.4)	3.8 (±0.3)

## Conclusions:

Combination of Cinacalcetum with calcium acetate + magnesium carbonate or with Alfacalcidol + Calcium carbonate are effective in the treatment of secondary hyperparathyroidism. Both combinations lead to a reduction in iPTH. But the combination of Cinacalcetum with calcium acetate and magnesium carbonate controls hyperphosphatemia and its manifestations more effectively.

## References:

1. KDIGO (Kidney Disease. Improving Global Outcomes) CKD- MBD Work Group. KDIGO clinical practice guideline for the diagnosis, evolution, prevention, and treatment of chronic kidney disease- mineral and bone disorder (CKD-MBD)/Kidney Int. – 2009. – Vol. 76 (Suppl.113).- P.S1-S130
2. National guidelines for mineral and bone disorders in Chronic Kidney Diseases. Russian Dialysis Society.// Nephrology and Dialysis- 2011-№13(1)- P.33.

