



## TRANSPLANTATION: TRANSFORMING THE LANDSCAPE TOWARDS A NEW HORIZON

### The use of Recombinant PTH Therapy in a Kidney Transplant Patient with Severe Hypocalcemia

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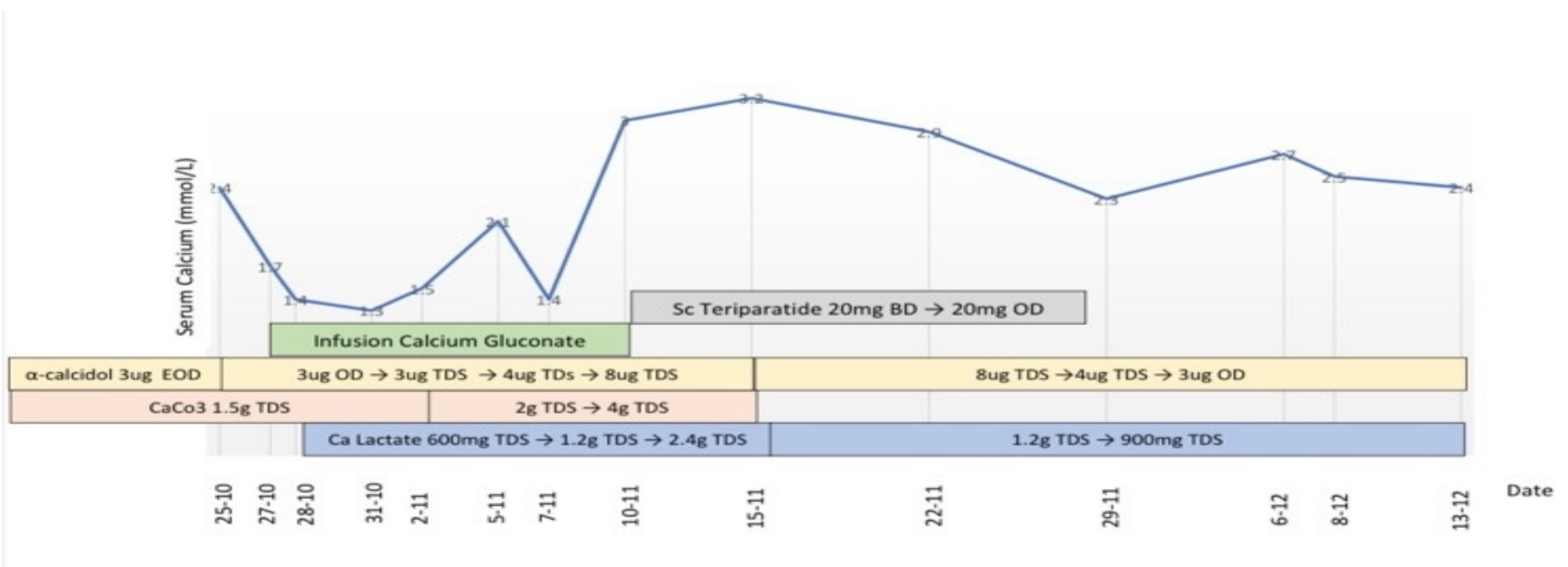
#### Introduction

Although it is more common for hypercalcemia to develop post renal transplant, there have been some cases with mild, transient hypocalcemia. However, it is uncommon to find severe, refractory hypocalcemia post renal transplant. Our patient had hypoparathyroidism post parathyroidectomy which can result in refractory hypocalcemia that is difficult to manage. Hypoparathyroidism causes high renal calcium excretion with phosphate retention which is unmasked upon return of renal function post transplantation resulting in hypocalcemia and hyperphosphatemia requiring high doses of vitamin D and calcium supplements.<sup>1</sup>

#### Case Report

Herein we report a case of severe, hypocalcemia in a 30-year-old lady with end stage renal disease secondary to chronic glomerulonephritis on hemodialysis for 14 years, who underwent a deceased donor kidney transplant on 25/10/21. She was induced with Basiliximab, followed by tacrolimus, mycophenolate mofetil and steroids with immediate graft function post transplant. Prior to her transplant, she had undergone a total parathyroidectomy 9 years pre transplant for tertiary hyperparathyroidism. She was on alpha calcidol 3mcg EOD and Calcium carbonate 1.5g tds prior to transplantation.

Pre transplant calcium and phosphate levels were normal and her iPTH level on 14/9/21 was <5.5pg/ml. She developed hypocalcemia, day 1 post-transplant which dropped further on day 2 post-transplant despite increased doses of oral calcium supplements and oral vitamin D. She then developed hyperphosphataemia with symptomatic hypocalcemia. Her 24hour urine calcium was 2.08 mmol/day. Continuous intravenous calcium infusion was started on day 3 post-transplant but her calcium levels remained low requiring increased doses of oral and IV calcium infusion plus oral vitamin D. S/C Teriparatide 20mg bd was started on 10/11/21, day 17 post-transplant. Her calcium levels improved significantly and rapidly. Her IV calcium infusion was stopped on day 1 post teriparatide and her calcium supplements and vitamin D requirements also reduced rapidly. She was discharged on 13/11/21 and was seen in the outpatient clinic. Her S/C Teriparatide dose was halved on 22/11/22 and subsequently stopped on 24/11/22. Her calcium supplements were tapered and reduced. She had no further episodes of hypocalcemia and her Vitamin D dose was reduced to 3mcg daily.



#### Conclusion

Teriparatide is a recombinant parathyroid hormone and is an effective and safe measure to manage severe, prolonged hypocalcemia secondary to persistent hypoparathyroidism post total parathyroidectomy in a renal transplant patient.

1. Hod T, Riella LV et al, Recombinant PTH therapy for severe hypoparathyroidism after kidney transplantation in pre transplant parathyroidectomized patients: review of the lit and a case report, Clin transplantation, 2015