# Continuous s.c. Recombinant PTH$^{1–34}$ Pump Therapy in Congenital Hypoparathyroidism Associated with Malabsorption

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The authors declare no potential conflict of interest.

## BACKGROUND

• Congenital hypoparathyroidism (CH) is a rare disease that usually responds well to conventional therapy with active vitamin D and calcium supplementation.

• The successful use of continuous s.c. recombinant parathyroid hormone (rhPTH$^{1–34}$) infusion as a hormone replacement has been demonstrated in cases of CH caused by autosomal dominant hypoparathyroidism or autoimmune polyendocrine syndrome type 1. [1,2]

## CASE REPORT

• 13-year-old boy, born to consanguineous South-Asian parents, was diagnosed with CH in infancy.

• Initially managed on conventional treatment with oral calcium supplements and vitamin D analogues.

• Subsequently diagnosed with sensory neural deafness, developmental delay and cryptogenic liver disease requiring liver transplant at the age of 2 years.

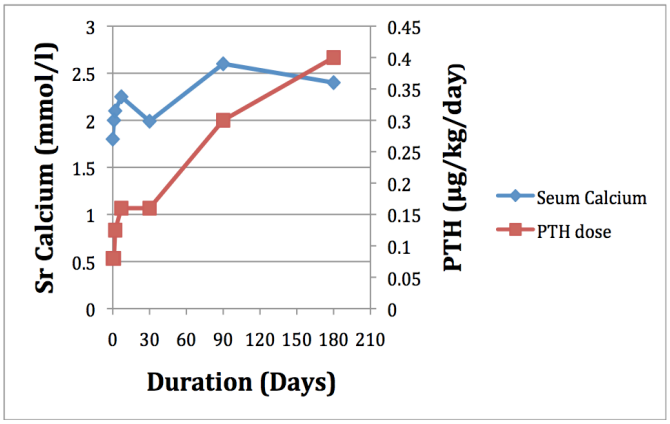
• He developed persistent diarrhoea with hypoalbuminaemia, lymphopenia and recurrent severe hypocalcaemia.

• Video capsule endoscopy confirmed extensive intestinal lymphangectasia, not amenable to surgery.

• Serum calcium remained between 1.26 and 1.98 mmol/L, despite high doses of alfacalcidol (200ng/kg) and oral calcium supplements (300mg/kg/day)

•Multiple hospital admissions with either hypocalcaemic seizures or symptomatic refractory hypocalcaemia requiring i.v. calcium infusions.

• He was commenced on a continuous s.c. infusion of rhPTH$^{1–34}$ (teriparatide) delivered via a Medtronic pump on a dose of 0.16 micrograms/ kg per day.




rhPTH$^{1–34}$ dose titration against Serum Calcium

## RESULTS

• He was successfully weaned off alfacalcidol and magnesium supplements 24hr after starting rhPTH$^{1-34}$.

• His serum calcium normalised and stabilised within days of commencing s.c. rhPTH$^{1-34}$.

• The dose of teriparatide is being titrated against serum calcium and urinary calcium excretion.

## CONCLUSION

We describe the first case of successful use of continuous s.c. rhPTH$^{1–34}$ therapy in a patient with CH and associated severe malabsorption.

## REFERENCES

1. Linglart, Agnès, et al. Long-term results of continuous subcutaneous recombinant PTH (1-34) infusion in children with refractory hypoparathyroidism. The Journal of Clinical Endocrinology & Metabolism 96.11 (2011): 3308-3312.
2. Winer, Karen K., et al. Effects of Pump versus Twice-Daily Injection Delivery of Synthetic Parathyroid Hormone 1-34 in Children with Severe Congenital Hypoparathyroidism. The Journal of Pediatrics (2014);165(3);556-563

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