Continuous s.c. Recombinant PTH1–34 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 (rhPTH1–34) 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 rhPTH1–34 (teriparatide) delivered via a Medtronic pump on a dose of 0.16 micrograms/ kg per day.

RESULTS

- He was successfully weaned off alfacalcidol and magnesium supplements 24hr after starting rhPTH1–34.
- His serum calcium normalised and stabilised within days of commencing s.c. rhPTH1–34.
- 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. rhPTH1–34 therapy in a patient with CH and associated severe malabsorption.

REFERENCES