Effects and Limitations of Cinacalcet Therapy
In Neonatal Severe Hyperparathyroidism

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Background
NSHPT has been associated with inactivating mutations of the CaSR gene.
Impaired inhibition of PTH secretion by extracellular ionized calcium and decreased urinary excretion of calcium can lead to severe hypercalcemia in the first days of life.
Calcium responsiveness of the CaSR is amplified by type 2 calcimimetic agents like cinacalcet, which has been able to normalize PTH and calcium levels in cases of NSHPT and postpone parathyroidectomy¹,².

Case Report
A full-term female newborn presented with severe respiratory distress due to thoracic and pulmonary hypoplasia at birth and hypotonia and failure to thrive in the following weeks.
On the sixth day of life the serum calcium level was elevated to 3.27 mmol/l (N: 2.10-2.65). Further evaluation showed hyperparathyroidism (iPTH 790 pg/ml, N: 15-65) in the presence of low urinary calcium excretion.

Discussion
In the presence of normal PTH levels and increased urinary calcium excretion other mutations have been discussed to additionally impair calcium sensing in patients who do not reach eucalcemia. Vitamin D prophylaxis might also influence calcium levels.

References