

# Resistant hypocalcemia post parathyroidectomy attributed to imatinib

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## Background:

Hypocalcaemia post parathyroidectomy and thyroidectomy is common and usually transient. A variety of drugs including tyrosine kinase inhibitors can cause hypocalcaemia. We present a case where a patient with primary hyperparathyroidism on imatinib with pre-op calcium 2.86 mmol/L, post-operatively developed resistant hypocalcaemia necessitating prolonged hospitalisation and multiple calcium infusions which was not solely attributable to hungry bone syndrome.

## Case Report:

54 years old female on imatinib for Gastro intestinal stromal tumor (GIST) developed primary hyperparathyroidism. Sestamibi scan confirmed two parathyroid adenomas and thyroid nodules. FNA graded the thyroid nodules as Thy 3, therefore, a total thyroidectomy with removal of two parathyroid adenomas was performed. Two weeks post-operatively she developed tetany with calcium 1.26mmol/L. despite correction of mild hypomagnesaemia (0.6mmol/L), repeated intravenous calcium, 1 alpha calcidol and oral calcium supplementations she failed to achieve normocalcaemia. This was only achieved by withholding imatinib after discussion with oncology. She subsequently was able to restart imatinib with no further hypocalcaemic episodes.

## Conclusions:

Hypocalcaemia due to tyrosine kinase inhibitors is recognised but rare (1) and possibly due to bone remodelling (2). We believe the combination of hungry bone syndrome and concurrent imatinib use caused prolonged hypocalcaemia in this patient. We therefore would suggest tyrosine kinase inhibitors are withheld immediately before and for a few weeks post parathyroidectomy to reduce the risk of severe hypocalcemia.

## References:

1. Petric et al (2017) A rare case of hypocalcemia induced by nilotinib. *Endo Onc & Metab.*
2. Vandyke et al 2010 Dysregulation of bone remodeling by imatinib mesylate. *Blood*