Hypocalcaemia is a common electrolyte disorder that can be caused by the "hungry bone syndrome" following a parathyroidectomy or rapid bone remineralization after a total thyroidectomy. It has been postulated that routine vitamin D and calcium supplementation may reduce the rate of symptomatic post-operative hypocalcaemia and that some postoperative hypocalcemic crises may reflect undiagnosed severe vitamin D deficiency (1).

**Background**

- **Hypocalcaemia** is a common electrolyte disorder that can be caused by the “hungry bone syndrome” following a parathyroidectomy or rapid bone remineralization after a total thyroidectomy.
- It has been postulated that routine vitamin D and calcium supplementation may reduce the rate of symptomatic post-operative hypocalcaemia and that some postoperative hypocalcemic crises may reflect undiagnosed severe vitamin D deficiency (1).

**Objectives**

- To establish the prevalence of post-operative severe hypocalcaemia, defined as requiring IV calcium following thyroidectomy or parathyroidectomy according to the local post-operative hypocalcaemia protocol (2).
- To explore the relationship between severe post-operative hypocalcaemia and vitamin D status as defined by the NOS guideline (3).

**Methods**

- Patient sample: 466 patients, ward 44, RVI, Newcastle, operated 7/12/2010 – 7/01/2014.
- List of patients who received IV calcium obtained from e-prescribing records.
- Data was collected from paper notes and electronic records using a proforma.
- **Limitations**: timescale and a small number of patients with severe post-operative hypocalcaemia.

**Results**

- 14 out of 466 patients required IV calcium following parathyroidectomy or thyroidectomy.

**Discussion**

- Severe post-operative hypocalcaemia requiring IV calcium is currently a rare event.
- Relatively higher prevalence in patients who had a total thyroidectomy suggests that they should be monitored more closely.
- Vitamin D insufficiency was common among patients who required IV calcium post-operatively.
- Correction of vitamin D levels by the time of surgery did not provide 100% protection against severe post-operative hypocalcaemia.
- Further work is needed to explore the relationship between post-operative hypocalcaemia and vitamin D status.

**References:**
2) Endocrine Surgery. Prof Lennard and Mr Bliss, Post-op hypocalcaemia following thyroidectomy and parathyroidectomy – guidance for junior medical staff, displayed on ward 44, RVI, Newcastle.