INTRODUCTION

- We describe the diagnosis and successful management of a rare case of occult severe hyperparathyroidism due to a well-differentiated pulmonary neuroendocrine tumor.
- While hypercalcemia improved after tumor resection, the patient developed hungry bone syndrome causing hypocalcemia.

CASE PRESENTATION

- A 39-year-old female who presented with leg pain and no other symptoms was found to have a 9-cm lytic femur lesion and 3-cm right lower lung lesion.
- Hypercalcemia was treated with IV fluids, calcitonin, and IV pamidronate.
- Neck ultrasound did not show a parathyroid lesion.
- Intraoperative diluted PTH was 678 pg/mL and postoperative PTH 51 pg/mL following right lower lung lobectomy.

FURTHER MANAGEMENT

- After removal of the tumor, she developed symptomatic hypocalcemia, with nadir calcium on postoperative day 4 (Table 1).
- Calcium gluconate infusion, oral calcium, vitamin D, and calcitriol were used to maintain calcium within range.
- By postoperative day 30, PTH and Ca normalized on high doses of calcitriol, calcium carbonate, and vitamin D.

CONCLUSIONS

- This is a rare presentation of a well-differentiated pulmonary neuroendocrine tumor producing extremely high levels of PTH with resultant severe hyperparathyroidism, PTH-mediated bone changes, and pathological fracture complicated by hungry bone syndrome following resection of the source of PTH.
- To our knowledge, this is the first report of a pulmonary neuroendocrine tumor producing PTH, as most cases of neuroendocrine tumor-induced hypercalcemia are PTHrP-mediated.

REFERENCES