

Abstract citation ID: bvac150.433

## **Bone & Mineral Metabolism**

*PSAT203*

***Acquired Resistance to Medical Management in a Patient with Parathyroid Crisis due to a Parathyroid Adenoma***

*Ravi Kant, MBBS, Mc Anto Antony, MD,*

*Mansi Joglekar, BS, MD Candidate, Rashmi Chandra, MD, and*

*Priyanshu Nain, MBBS*

**Introduction:** Parathyroid crisis is characterized by severe hypercalcemia associated with multiple organ dysfunction.

**Case:** 90 years-old Caucasian man was hospitalized for progressive confusion over 3 days and was noted to have a critically elevated serum calcium (S Ca) 16.8 mg/dl (8.6-10.0) with albumin 4.1 mg/dl. Patient had a good functional status prior to the hospitalization. On further evaluation, patient was diagnosed with primary hyperparathyroidism with a high suspicion for parathyroid cancer, with labs showing a markedly elevated PTH 1183 pg/ml (15-65) and ionized Ca >1.85 mmol/L (1.15-1.35). Of note, S Ca was normal at 9.5 mg/dl (no albumin) approximately 20 months prior to the hospitalization.

Parathyroid ultrasound showed a 1.8×1.7×1.1 cm left superior parathyroid mass with ill-defined margins. Sestamibi scan confirmed a left superior parathyroid mass. CT neck/chest/abdomen/pelvis with contrast showed a 1.8×1.1×1.9 cm left superior parathyroid mass with enhancement and punctate non-obstructing right kidney stones.

Hypercalcemia responded extremely well to medical management (calcitonin, 4 mg of zoledronic acid infusion and 13 days of cinacalcet 30 mg daily) resulting in normalization of S Ca. However, patient required a prolonged hospitalization for aspiration pneumonia and severe electrolyte disturbances. Since patient was not a good surgical candidate and hypercalcemia resolved on medical management, patient was discharged to a rehab facility with the plan to pursue parathyroidectomy as outpatient.

S Ca worsened progressively and was 10.4 mg/dl (albumin 3.6 mg/dl) with PTH 130 pg/ml on day 15 after discharge. Cinacalcet was added when hypercalcemia further worsened to 11.7 mg/dl (albumin 3.6 mg/dl) on day 38. However, patient was hospitalized again for altered mental status, recurrent severe hypercalcemia (S Ca 15.7 mg/dl, albumin 3.8 mg/dl, PTH 1299 pg/ml), hypokalemia and urinary tract infection. In the ED, patient developed complete heart block that responded to atropine.

Interestingly, hypercalcemia was recalcitrant to aggressive medical management during this hospitalization (zoledronic acid 4 mg infusion, calcitonin IM- increased up to 6 mg IM q6hr, cinacalcet- increased to 60 mg PO BID and IV fluid resuscitation with furosemide as needed). S Ca was 14.2 mg/dl (albumin 3.4 mg/dl) on day 8 of hospitalization. Therefore, urgent left superior parathyroidectomy was performed. Surgical pathology revealed a 3.1 gm parathyroid adenoma. Post-operative day#1 labs showed normal PTH 17.3 pg/ml, S Ca 12.1 mg/dl and albumin 3.2 mg/dl. S Ca and patient's mental status normalized over next few days.

**Discussion:** Urgent parathyroidectomy has shown to have excellent outcomes in patients with parathyroid crisis. Our patient's severe hypercalcemia initially responded excellently to medical management but recurred within few weeks and developed resistance to medical management. Our case highlights the importance of performing surgical exploration as soon as possible after initial medical stabilization in patients with parathyroid crisis.

**Presentation:** Saturday, June 11, 2022 1:00 p.m. - 3:00 p.m.