was noted, there was no tumor necrosis, and no mitotic figures were present. The tumor appeared to be encapsulated in the adrenal gland and the Ki-67 stain was negative in ganglioneuroma cells.

Conclusion:
Adrenal adenomas that appear as incidentalomas in young adulthood are extremely rare. Evaluating younger versus older adults found to harbor an adrenal “incidentaloma” requires a unique approach for each age group, as the differential diagnosis varies widely. In our patient, the imaging was extremely concerning and diagnostic considerations included neuroblastoma, adrenocortical malignancy, pheochromocytoma, or ganglioneuroma. Adrenal ganglioneuromas are most frequently diagnosed in fourth and fifth decades of life. In younger adults ganglioneuromas are usually found in the retroperitoneum and posterior mediastinum. For our patient, surgical resection of the adrenal mass confirmed the pathologic diagnosis and provided definitive cure.

Thyroid

THYROID DISORDERS CASE REPORTS II

Vitals for the Prompt Recognition of Myxedema Crisis in a Critically Ill Patient
Katalina Funke, MD, 1 Faisal Aljahani, MD, 2 Aundrea Loftley, MD. 3
1Medical University of South Carolina, Charleston, SC, USA, 2Medical University of South Carolina, Mount Pleasant, SC, USA.

SAT-469
Myxedema coma is a rare but life-threatening condition if not treated promptly. The time from initial presentation to diagnosis may be prolonged in patients with severe illness whose presenting features are common to myxedema crisis. A 94-year-old male admitted to the neuroscience intensive care unit for acute stroke monitoring after intra arterial thrombolysis was treated for myxedema three days after initial labs revealed severe hypothyroidism and a myxedema score greater than 60. A diagnostic scoring system for the diagnosis of myxedema coma gives points for the following to easily identify patients with high likelihood of decompensated state of extreme hypothyroidism. Given the potential for under recognition of myxedema crisis in severe illness the clinician must pay close attention to vital signs and have a high level of suspicion for myxedema crisis and low threshold for treatment if myxedema score indicates high likelihood despite concomitant critical illness.

Thyroid

THYROID DISORDERS CASE REPORTS II

Graves’-Associated Takotsubo Cardiomyopathy: An Uncommon Condition
Michael Mortensen, DO 1, Michael Bryer-Ash, MD, FRCC, MRCP 2, Karyne Lima Vinales, MD 3, Ricardo Rafael Correa, MD, EsD, FACP, FACEM, FACP, CMQ, CMQ 3.
1Phoenix VA Healthcare System, Flagstaff, AZ, USA, 2Banner University Medical Center, Phoenix, AZ, USA, 3Phoenix VA Healthcare System, Phoenix, AZ, USA, 4University of Arizona College of Medicine Phoenix, Phoenix, AZ, USA.

SAT-498
Introduction Graves’ disease is an autoimmune disorder that causes excess thyroid hormone (T4 and T3). T4 is converted into T3 (active hormone) in the peripheral tissues by the deiodinase enzyme. T3 has an effect on the cardiac electrical system as well as myocyte contractility. Excess T3 can result in cardiac arrhythmias as well as ventricular dysfunction (heart failure). Takotsubo cardiomyopathy is a subtype of nonischemic cardiomyopathy related to severe physiologic or mental stress. Excess catecholamine levels have been reported to cause this disease as well. Takotsubo cardiomyopathy has rarely been reported in Graves’-associated thyrotoxicosis.

Case report 55-year-old female who presented to the ED with palpitations and difficulty breathing. She had been seen by her PCP within the past two weeks with complaint of recent 30 lb weight. TSH was noted to be < 0.001 and a neck ultrasound revealed a diffusely enlarged, hypervascular thyroid. She was referred for outpatient endocrinology consultation for further workup. Prior to her initial endocrinology appointment, she developed palpitations and shortness of breath. She did not have any known family history of thyroid disease or other autoimmune conditions. She drinks 1-2 glasses of wine per week and quit smoking in 2017. Physical exam on admission revealed a heart rate of 133 bpm and a blood pressure of 145/93, normal temperature, and normal respirations. Thyroid was diffusely enlarged and without nodularity. No evidence of orbitopathy. Heart was tachycardic but without murmur. Lungs clear. Abdomen soft, nontender. No significant peripheral edema or pretibial rash. No neurological dysfunction. Labs revealed TSH < 0.001, Free T4 > 7.77, Free T3 12.0, TRAb 44.4%, TSI 433%, Anti-TPO 614, high-sensitivity troponin of 112. EKG showed nonspecific infero-lateral T wave changes, rate 123. Echocardiogram demonstrated left ventricular apical hypokinesia but preserved basilar contractility. Ejection fraction was estimated at 40-45%. Nuclear stress test did not reveal any indication of myocardial hypoperfusion.

Discussion/Conclusion Takotsubo cardiomyopathy can mimic acute myocardial infarction both clinically as well as on EKG/serum biomarkers. Troponin levels are typically elevated as a result of myocardial stretch and subsequent troponin “leak”. Echocardiogram demonstrates apical ballooning of the left ventricle, and by definition coronary arteries will be free of significant occlusive disease. A small number of cases have been reported in association with endocrine conditions including thyrotoxicosis due to Graves’ disease. The majority of cases associated with thyrotoxicosis will resolve spontaneously with 1-3 weeks. Treatment consists of medication to decrease cardiac preload as well as afterload (ACE inhibitor, beta blocker, diuresis as needed), similar to medical treatment of other nonischemic cardiomyopathies.

Bone and Mineral Metabolism

BONE AND MINERAL CASE REPORTS II

Hypercalcemia After Placement of Antibiotic-Loaded Calcium Sulfate Beads
Kyrstin Lane, MD, Sarah Kim, MD, Shira Groch, MD, Matthew Freeby, MD.
University of California Los Angeles, Los Angeles, CA, USA.
MON-345
Calcium sulfate beads are used to fill bone voids in bone loss and nonunion, as well as in the management of bone and joint infections. Specifically, Stimulan® is an absorbed form of antibiotic-loaded calcium sulfate beads which delivers high local antibiotic concentrations for treatment of infection, but has also been associated with hypercalcemia in 5.4% of cases. Despite the significant morbidity associated with hypercalcemia, there is little published literature describing this important complication.

In our institution, five patients hospitalized between March 2019 and September 2019 with normal baseline calcium levels developed hypercalcemia as a complication of Stimulan® placement. Typically, 10 to 60 cc of Stimulan® were inserted in each surgery, with the exception of 120cc in one surgery. Three patients required a second surgery with antibiotic bead placement, and hypercalcemia occurred with both initial and subsequent surgeries. The onset of hypercalcemia varied from post-operative day one to four. The peak corrected calcium was 10.7-16.1 mg/dL which corresponded to ionized calcium of 1.57 to >2.20 mmol/L (normal 1.09-1.29 mmol/L). The patient with the highest bead volume had the highest calcium. Calcium peaked on post-operative days three to five. Patients were treated with intravenous fluids, furosemide, calcitonin and anti-resorptives including denosumab and zoledronic acid. Four patients required hemodialysis. Three patients required dialysis for symptomatic hypercalcemia and in one patient the indication was multifactorial. Calcium typically normalized by post-operative day 14 to 21, but hypercalcemia duration was unknown in two patients (one died; one had hypercalcemia on hospital discharge).

As illustrated in our cases, patients who develop hypercalcemia after their initial antibiotic bead placement may be at risk for recurrent hypercalcemia if additional surgeries use antibiotic beads. Higher bead volume may be associated with more significant hypercalcemia. Although previous cases have reported milder hypercalcemia, our cases demonstrate that hypercalcemia can be more severe and prolonged, necessitating dialysis in addition to traditional therapies.

References:
1. Kallala R, Harris WE, Ibrahim M, Dipane M, McPherson E. Use of Stimulan absorbable calcium sulphate beads in revision lower limb arthroplasty: Safety profile and complication rates. Bone Joint Res. 2018 Nov 3;7(10):570-579.
2. Kallala R, Haddad FS. Hypercalcaemia following the use of antibiotic-eluting absorbable calcium sulphate beads in revision arthroplasty for infection. Bone Joint J. 2015 Sep;97-B(9):1237-41.
3. Carlson Jr. CR, Markulis E, Thompson E, Havill J. A novel case of hypercalcemia following the use of calcium sulfate beads. Nephrol Open J. 2015; 1(1): 17-19.

Bone and Mineral Metabolism
BONE AND MINERAL CASE REPORTS II

When Osteoporosis Does Not Make Sense: Tumor-Induced Osteomalacia
Pawarid Techathavee, DO, Ghada Elshimy, MD, Kelvin Tran, DO, Karyne L. Vinales, MD, Ricardo R. Correa, MD, EsD, FACP, FACEM FAPCR, CMQ, CMQ.
University of Arizona College of Medicine-Phoenix, Phoenix, AZ, USA.

Adrenal
ADRENAL CASE REPORTS II

Rare Case of Adrenocortical Carcinoma with Tumor Extension into the Inferior Venacava, Right Atrium and Right Ventricle.
Asmat Qayoom Siddiqi, MD, Keith Cryar, MD, Jungyoon Yang, MD. Baylor Scott and White Health, Temple, TX, USA.