

Pheochromocytoma Mimicking Sepsis

Yasmine Elamir, MD; William Grist, MD

Patient is a seventy year old Egyptian female with past medical history of coronary artery disease, systolic heart failure, chronic kidney disease stage 3, hiatal hernia, and a benign pheochromocytoma previously worked up at a neighboring hospital, who was admitted for dyspnea and subjective fever intermittently for the past two weeks. Vitals on admission were normal except for a pulse oximetry of 93% and heart rate of 110. Chest x-ray revealed bilateral pulmonary infiltrates. She was treated for community acquired pneumonia with ceftriaxone and azithromycin. Four days after admission patient had a rapid response for respiratory distress and code sepsis called for fever of 102 degrees, leukocytosis of 23 (from 11.3 on admission), respiratory rate of 30, heart rate of 131, with blood pressure of 183/56 and pulse oximetry of 84%. Patient was intubated and transferred to ICU, where antibiotic coverage was broadened with vancomycin and piperacillin-tazobactam. Pan cultures obtained on admission returned negative and her symptoms resolved two days later. Patient's antibiotics were deescalated and patient was then discharged home. It was thought that her sepsis was likely secondary to pneumonia resulting in acute hypercapnic hypoxic respiratory failure. Patient returned four days later and was readmitted directly to the ICU for worsening dyspnea with a temperature of 102.0, leukocytosis of 27.4, heart rate of 149, respiratory rate of 30, with a blood pressure of 172/90 and pulse oximetry of 83%. Chest x-ray revealed new bilateral infiltrates from previous admission. Patient was intubated and treated with piperacillin-tazobactam, vancomycin, and gentamycin. Cultures again were obtained and again returned negative. At this point it was thought patient's hiatal hernia was leading to cough and aspiration during sleep causing recurrent pneumonia, but this did not explain the negative cultures. It was then thought after researching similar cases that the patient's pheochromocytoma could be leading to a "pseudo" septic picture. Records were obtained from a neighboring hospital that were significant for a PET scan revealing a 2.6x1.9cm left adrenal nodule with increased FDG avidity, elevated serum total metanephrines (676 mcg), urine total metanephrines (2021 mcg), urine normetanephrines (173 mcg). The pathology from biopsy study results were most consistent with pheochromocytoma with neoplastic cells, reactive for chromogranin, synaptophysin and vimentin. It was then determined that patient's septic symptoms were likely due to pheochromocytoma as patient's blood pressure would coincide with febrile episodes and dyspnea. Patient was placed on prazosin and blood pressure normalized during admission without return of fever. Pheochromocytoma should be considered as part of the differential diagnosis in the setting of recurrent dyspnea and sepsis when more common causes have been ruled out. It is also important to do this early as to prevent unnecessary antibiotic use and to prevent antibiotic resistance.