Hidden in plain sight

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INTRODUCTION

Hypercalcemia of malignancy is a common finding typically found in patients with advanced stage cancers. We present a case where hypercalcemia is the initial manifestation and led to diagnosis of occult malignancy.

CASE

Patient is a 72-year-old male with history of low-grade prostate cancer, bronchial carcinoid referred to the Emergency Department after he was noted to have elevated calcium levels of 14 mg/dL. Initial work up showed a PTH independent pattern with a PTH level of 8 pg/mL as well as an albumin of 3.8 g/dL, 25 Vitamin D 27.8 ng/mL. A more detailed evaluation was unremarkable except for an elevated 1,25 Vitamin D level of 133 pg/mL. An extensive work up including UPEP and SPEP, PTH related protein, Tuberculosis, ACE levels, flow cytometry, bone marrow biopsy and were reported normal. Due to previous history of prostate cancer PSA was checked resulting at 5.9 but recent biopsy showed 12/12 cores negative for malignancy. Imaging studies including skeletal surveys did not show an obvious malignancy, but CT thorax and abdomen showed mild splenomegaly. Patient was given a dose of Pamidronate 60 mg to which he had minimal response. In the outpatient setting Denosumab was started at 120 mg for 2 doses. Given no obvious source for the patient's hypercalcemia a Positron Emission Tomography was done showing a markedly hypermetabolic spleen which raised suspicion for the possibility of splenic lymphoma. Patient underwent splenectomy and pathology was consistent with primary splenic large B cell lymphoma. Within 24 hours of the splenectomy the calcium levels normalized.

RESULTS/IMAGING

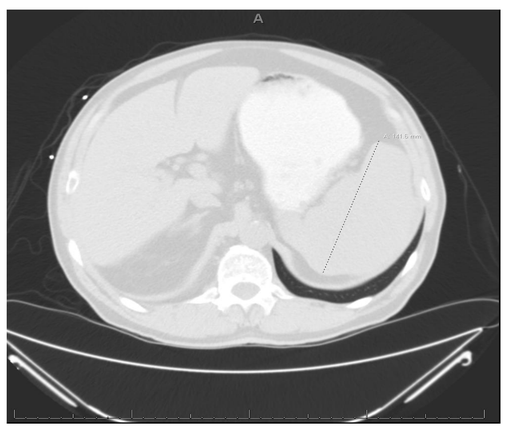

Fig. 1: Computed Tomography of the abdomen showing splenomegaly measuring 141.6 mm.

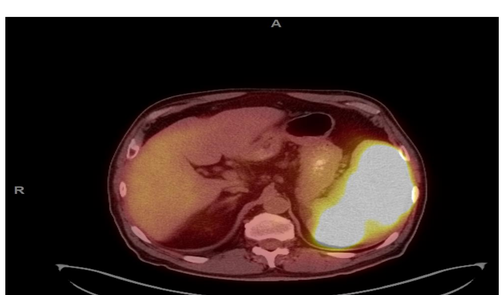

Fig. 2: Positron Emission Tomography of the abdomen showing hypermetabolic activity involving >90% of the spleen with a composite max SUV of 15.6.

CONCLUSIONS

Hypercalcemia of malignancy usually presents with markedly elevated calcium levels. Several major mechanisms are shown to be associated with hypercalcemia of malignancy including parathyroid hormone-related peptide-mediated humoral hypercalcemia, osteolytic metastases-related hypercalcemia, 1,25 Vitamin D-mediated hypercalcemia. Lymphomas have been linked to hypercalcemia by different mechanisms but ectopic increased activity of 1-alpha-hydroxylase resulting in elevated levels of 1,25 Vitamin D seems to be more common mechanism. Literature review shows that Non-Hodgkin's lymphoma is associated with elevated 1,25 vitamin D levels in one third of the cases opposed to Hodgkin which have increased levels in almost all of them. This case highlights an uncommon presentation of hypercalcemia as a result of elevated 1,25 Vitamin D from splenic large B cell lymphoma and the rapid resolution shortly after splenectomy.

REFERENCES

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