MEDIBEATS
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Investigation Corner

Hypercalcemia of malignancy (HHM) is a common complication of cancer. Elevations of PTHrP are the most common cause of malignancy-associated hypercalcemia. PTHrP leads to hypercalcemia by stimulating calcium resorption from bone and reabsorption in the kidneys. It also plays a significant function in osteolysis in bony metastases, particularly in breast cancer, and has been postulated to play a role in malignancy-associated cachexia through induction of orexigenic peptides.

Various malignancies secrete PTHrP resulting in HHM. PTHrP production is most commonly seen in carcinomas of breast, lung (squamous), head and neck (squamous), kidney, bladder, cervix, uterus, andovary. Neuroendocrine tumors may also occasionally produce PTHrP. Most other carcinomas, sarcomas, and hematolymphoid malignancies only sporadically produce PTHrP, with the exception of T-celllymphomasandmyeloma. In HHM, the typical laboratory presentation includes elevated calcium and PTHrP, decreased PTH,and suppressed serum1,25 dihydroxy vitamin D3 levels. Patients with HHM may have increased PTHrP values before treatment. PTHrP level decreases and PTH level increases, accompanied by decreased serum calciumvalues, are observed with successful treatment.

ReferenceValues:<4.2pmol/L

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