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“Stage II Endometrial Carcinoma with False Positive Para-Aortic Lymphadenopathy: the importance of pretest probability.”

Purpose: Case report to increase awareness of pretest probability in the presence of abnormal imaging findings

Methods: Review of Electronic Health Records and literature review

Results: This patient is a 61-year-old female with a history of intermittent vaginal spotting since her early 50's. On physical exam, normal vaginal atrophy was observed, and bi-manual recto-vaginal exam showed normal-sized uterus without adnexal masses or nodularity. A Pap-smear with dilation and curettage revealed endometrial carcinoma, endometrioid type with squamous differentiation. Hysterectomy with bilateral salpingo-oophorectomy, bilateral pelvic sentinel biopsy, and bilateral pelvic lymphadenectomy was performed. Pathology showed a grade 1 endometrioid carcinoma with greater than 50% myometrial invasion. The cervical stroma contained a 2 mm focus of tumor, and all 18 pelvic lymph nodes were negative meriting a diagnosis of Stage II endometrial carcinoma. Vaginal cuff brachytherapy, a non-morbid treatment, was offered as adjuvant therapy.

Staging PET/CT scan showed a hypermetabolic left para-aortic lymph node at the renal level suspicious for active neoplastic disease. Based on this the recommendation for adjuvant treatment was changed to extended field radiation and systemic chemotherapy, a treatment associated with significantly more toxicity. However, it was discussed that this was an unusual presentation and further evaluation was required. A CT-guided biopsy of the left para-aortic lymph node was performed and showed no malignant cells. Patient received vaginal brachytherapy. PET/CT three months later showed persistent, unchanged metabolically active left para-aortic lymphadenopathy. A repeat biopsy showed no malignancy. The scan also showed persistent chronic nephrolithiasis and obstructive uropathy of the left kidney with severe parenchymal atrophy. Uteroscopic stone extraction with lithotripsy and stent placement was performed. Patient remains without evidence of cancer recurrence 30 months after surgery.

Conclusions: This case shows the importance of using the pre-test probability when interpreting test results. PET/CT scan is highly sensitive and specific for endometrial cancer. However, para-aortic lymph node metastasis without pelvic lymph node metastasis from endometrial carcinoma is very rare (low pre-test probability). This low pre-test probability raised the concern about the PET/CT findings. The patient was spared the toxicity of unnecessary chemotherapy and extended field radiation. It was concluded that the findings on PET scan were related to the inflammatory process in the kidney associated with the nephrolithiasis and chronic obstructive uropathy. This case shows the importance of taking into the account the pre-test probability when interpreting any test.