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RARE CASE REPORT OF DOUBLE MALIGNANCY URETERAL AND BREAST CARCINOMA.

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Abstract : Ureteral cancer and breast cancer can occur individually in many patients. The occurrence of both in the same patient is a rare phenomenon. A 52-year old postmenopausal female, diagnosed as a case of Right Ureteral cancer-T3N0M0 (HPE-Transitional cell carcinoma), low-grade papillary type, had undergone Right nephrectomy with bladder-cyst excision on August-2014. She also received 4 cycles of Inj.Gemcitabine and Inj.Cisplatin, following which she noticed a lump in the Right breast, upper-outer quadrant. Clinically it was a 4x4cm mass, mobile and non-tender with axillary fullness. FNAC-smear was positive for malignancy. Mammogram showed BIRADS-V and was staged as cT2N0M0. Right Modified radical mastectomy was done in January-2015, it was pathologically T3N0M0. HPE came as Infiltrating ductal carcinoma Grade-II. 44 nodes dissected-no tumor metastasis. Posterior margins-close margins. Lymphovascular invasion ve. IHC-Triple Negative. This was followed by 4cycles of FAC and 4cycles of Taxane. PMRT was planned in two fieldsTangential portals for flap and Single AP portal for drainage area with tracheal shield and Head of humerus shield. 50Gy200cGy25 planned and executed followed by Post-Axillary boost. This case is presented for its rarity.

Keyword :double malignancy, ureter, breast, Lynch syndrome 2

INTRODUCTION:

Ureteral cancer and breast cancer can occur individually in many patients. The occurrence of both in the same patient is a rare phenomenon and constitutes less than 1% of prevalence. At the molecular level, Lynch syndrome is characterized by germline mutations in genes responsible for the repair of DNA replication errors, the mismatch repair (MMR) genes, in particular MLH1, MSH2, MSH6 and PMS2. Germline deletion of the 3' exons of TACSTD1/EPCAM can cause heritable somatic methylation and inactivation of MSH2 and thus Lynch syndrome . De novo mutations are very rare. Deficiency of MMR genes causes replication errors (mismatches) in repetitive DNA segments, known as microsatellites. Criteria used to identify Lynch syndrome are called the **revised Bethesda guidelines**, which are listed below:

· Developing colorectal cancer younger than age 50.

· Developing colorectal cancer and other cancers* linked with Lynch syndrome separately or at the same time.

·Developing colorectal cancer with tumor features linked to Lynch syndrome at an age younger than 60.

· Colorectal cancer in one or more first-degree relatives who also has or had another Lynch syndrome-related cancer*, with one of these cancers developing before age 50.

· Colorectal cancer in two or more first- or second-degree relatives with another Lynch syndrome-related cancer.

*(colorectal cancer, endometrial cancer, small bowel, ureter, or renal pelvis cancer, breast, ovarian cancer).

CASE REPORT:

A 52-year old postmenopausal female, presented with c/o loin pain , fever and hematuria. On evaluation she was diagnosed to have a ureteric mass, HPE-Transitional cell carcinoma, low-grade papillary type. Staged as right Ureteral cancer-T3N0M0 .She underwent right nephrectomy with bladder-cyst excision in August-2014 and received 4 cycles of adjuvant Inj.Gemcitabine and Inj.Cisplatin.

Following which she noticed a lump in the Right breast, upper-outer quadrant. Clinically it was a 4x4cms mass, mobile and non-tender. On evaluation with FNAC-smear was positive for malignancy. Mammogram of Right breast-BIRADS-V. Metastatic survey included ultrasound abdomen ,skeletal survey and xray chest was within normal limits.Right Modified radical mastectomy was done in January-2015. HPE-Infiltrating ductal carcinoma Grade-II.No nodal positivity. Lymphovascular invasion +ve. Immunohistochemistry-Triple Negative for ER, PR, HER2 Neu. Staged as pT3N0M0.she received 4cycles of FAC and 4cycles of Taxane. Post mastectomy radiation was planned to chest wall and drainage field. Two tangential fields for chestwall and single anterior field for drainage. .Dose fractionation 50Gy/200cGy/25#.

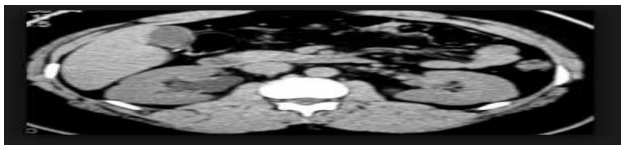
DISCUSSION:

Having no gender, ethnic or cultural preferences, Lynch syndrome targets families, predisposing them to cancer at a younger than average age. Children of a Lynch syndrome parent possess a 50% risk of acquiring a mutation. Those with Lynch syndrome carry up to an 85% risk of contracting colon cancer as well as a higher than average risk for endometrial cancer, stomach, pancreas, kidney/ureter tract, hepatobiliary tract, gastric tract, prostate, ovarian, gallbladder duct, brain, small intestine, breast and skin cancers. People with HNPCC tend to develop cancers earlier than the general population, and therefore should begin screening earlier. It is estimated that 15% of people with HNPCC will develop colorectal cancer by age 40. also be associated.

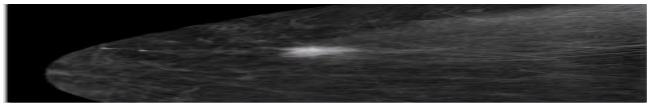
People with HNPCC should have a colonoscopy beginning at age 20 to 25 years, and repeated every 1 to 2 years. Women in these families are at increased risk for endometrial cancer, and should consider annual transvaginal ultrasound or endometrial biopsy starting at age 25 to 35. Families with histories meeting the criteria may wish to undergo genetic testing to determine if they carry the defective gene. If this test is positive (usually done on the affected family member's tumor) for a genetic abnormality, other family members at risk can then be tested for the same abnormality. If no abnormality is detected in the family member's tumor, then testing other family members would not be informative. However, the tests that are currently available are not 100% accurate. Depending on the methods used, they can miss positive cases anywhere from 5 to 50% of the time. A family may carry a mutation in a gene that has not yet been discovered or a mutation for which that testing has not yet been developed.

CONCLUSION:

Association of ureteral and breast canser is a rare phenomenon. Occurance of both in a same patient, points to Lynch syndrome 2. Lynch-2 syndrome (HNPCC associated with other cancers) is one such syndrome which involves cancer of both upper urinary tract (ureter and kidneys) and breast. A subset of Cowdens syndrome, with germline KLLN mutation in PTEN-negative patients, causing KLLN-hypermethylation leading to cell-cycle arrest and apoptosis, may also be associated



CT abdomen showing right hydroureteronephrosis due to right ureteric mass



mammogram showing breast lesion

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