



A Rare Case of Synchronous Malignancies in Cervix and Nasopharynx

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History:

A 32/Female presented with c/o menometrorrhagia for 1 month. On per vaginal examination she had an ulceroproliferative lesion in the cervix and upper vagina. On per rectal examination b/1, parametrium was medically involved. After an ultrasound and punch biopsy, she was diagnosed with carcinoma cervix, squamous cell carcinoma. For metastatic work up PET CT was done

Pet CT Report:

The presence of FDG avid soft tissue density lesion involving the cervix, lower uterine body and proximal vaginal wall with relations and extension as described - suggests primary neoplastic pathology in this clinical setting. Presence of FDG avid few small bilateral internal iliac and left external iliac lymph nodes as described - appears metastatic lymph nodal lesions in this clinical setting. Presence of FDG avid, bulky posterior nasopharyngeal wall with FDG avid few small, bilateral cervical lymph nodes as described - findings are suspicious for infective pathology involving nasopharynx with reactive lymph nodes, although another possibility of neoplastic pathology involving nasopharynx with metastatic lymph nodes cannot be ruled out complete - suggest clinicopathological correlation. No evidence of FDG avid any other lymph nodal or any distant metastasis in the present scan.

Pet CT Images:

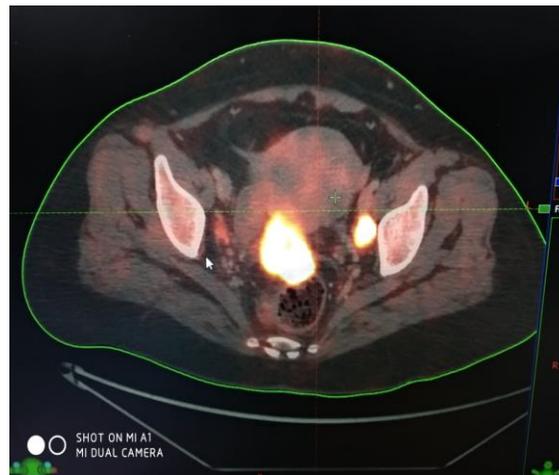


Figure 1



Figure 2

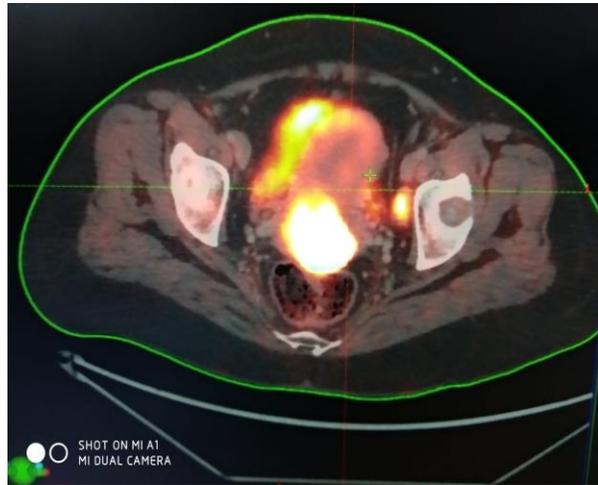


Figure 3



Figure 4

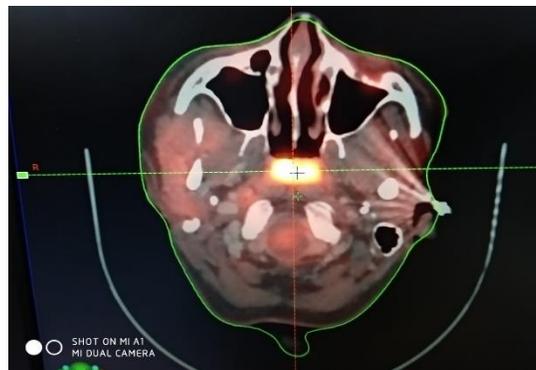


Figure 5



Figure 6

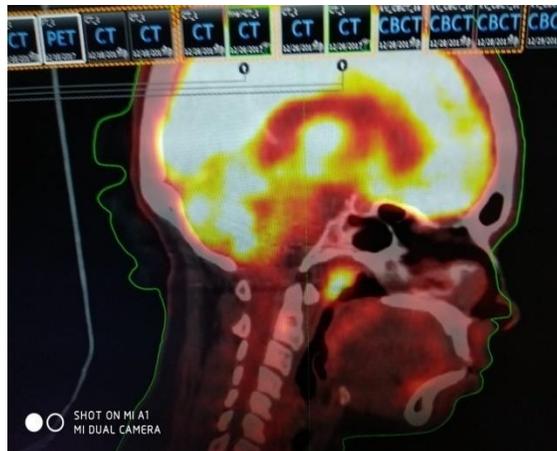


Figure 7



Figure 8

Clinical Discussion:

Pet ct confirmed the diagnosis as carcinoma cervix Stage IIb and detected a second primary of ca nasopharynx (cT1N1). USG guided Fnac from cervical node: Squamous cell carcinoma poorly differentiated. The case was discussed on the tumor board and it was decided to treat both the lesions by radical chemoradiation

Treatment:

After counseling the patient about the acute and late toxicities and taking her consent treatment was started. The nasopharyngeal lesion was treated to a dose of 66 gy in 30 fractions. The cervical lesion was treated to a dose of 50.4gy in 28 fractions. Both sites were treated by IGRT and bladder protocol was followed for cervical malignancy. The patient also received concurrent weekly cisplatin at a dose of 40 mg/m². The patient was followed up with a weekly CBC, serum creatinine before every cycle of chemotherapy. The patient was reviewed weekly by the radiation oncologist, medical oncologist and the dietician to monitor the toxicity of the patient and to ensure that the patient completes the treatment without any treatment breaks. The patient tolerated the treatment well with no treatment breaks. During the treatment, the patient developed grade 2 skin reaction, grade 2 mucositis in the head and neck region and grade 1 skin reaction grade 1 GI reaction and Grade 1 GU reaction. After completion of EBRT patient was referred for brachytherapy for cervical malignancy. She received 2 sessions of intracavitary radiotherapy to a dose of 15 Gy in 2 fractions.

Planning Images:

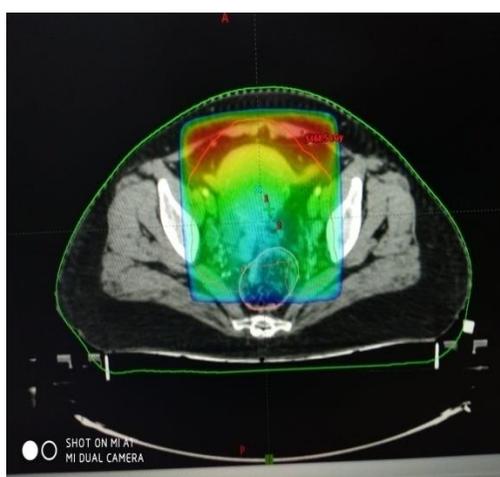


Figure 9



Figure 10

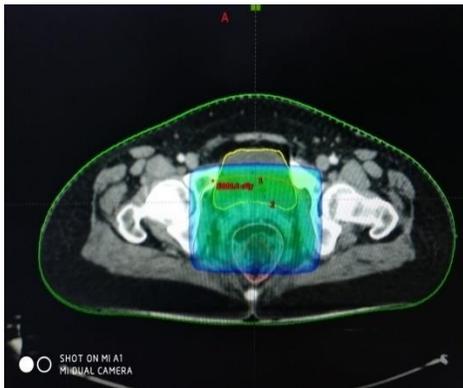


Figure 11

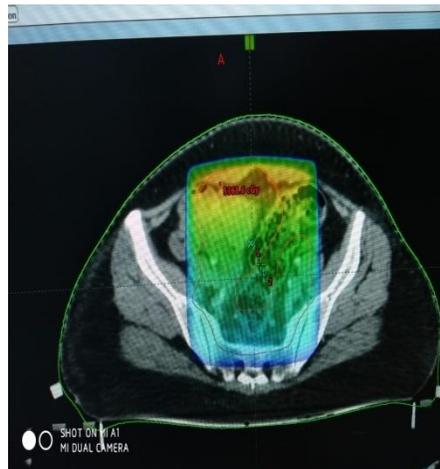


Figure 12

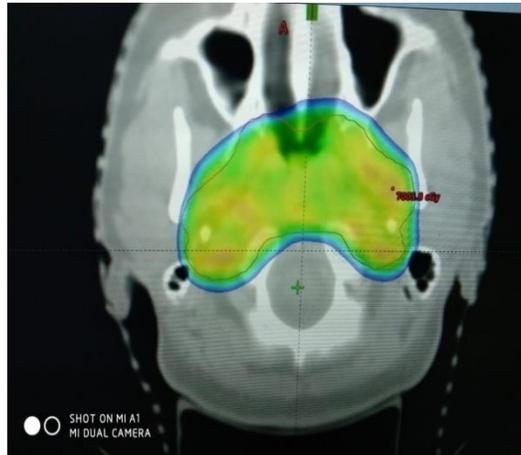


Figure 13

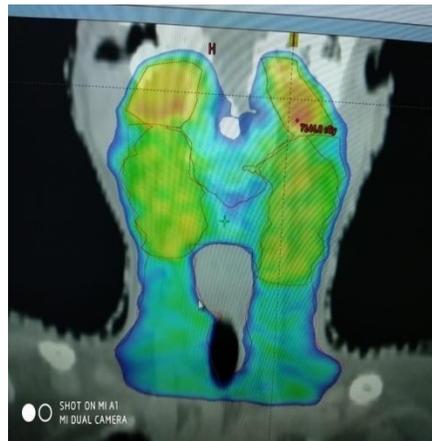


Figure 14

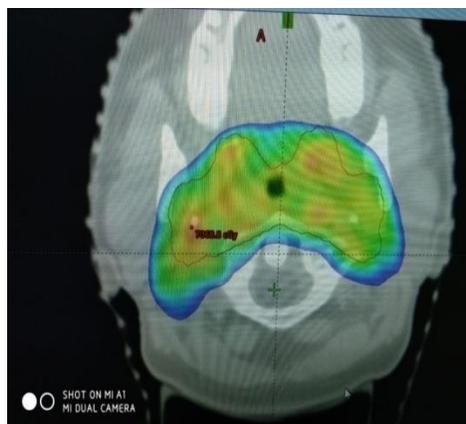


Figure 15



Figure 16

The carcinoma nasopharynx was planned by the rapid arc and the carcinoma cervix was planned by 3D Conformal Radiotherapy using the 4 field technique for 45GY/25# followed by midline block up to a total dose of 50.4GY/28#. Carcinoma cervix was treated with bladder protocol with a comfortably full bladder and daily cone-beam CT to verify the volume of bladder and rectum. The carcinoma nasopharynx was also imaged daily on the couch and treatment delivered after verification of the image.

Follow Up:

The patient was kept on monthly follow-up for 3 months with clinical examination being done at every visit. The patient had tolerated the treatment well and her acute toxicities had resolved within 1 month. At the end of 3 months, a pet ct was done to assess disease status. pet ct showed a complete metabolic response. A PET CT which was repeated at 1-year post-radiation confirms these findings. The patient is now on follow-up for 21 months.

Pet CT(Post Rt) Images:



Figure 17

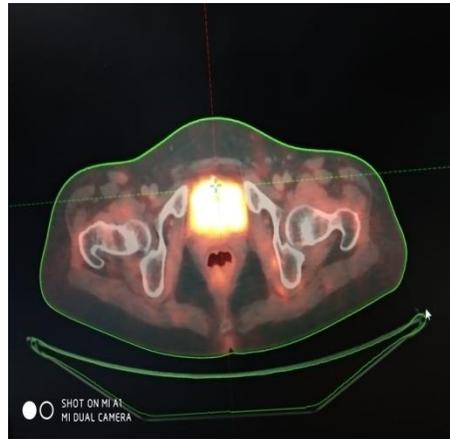


Figure 18

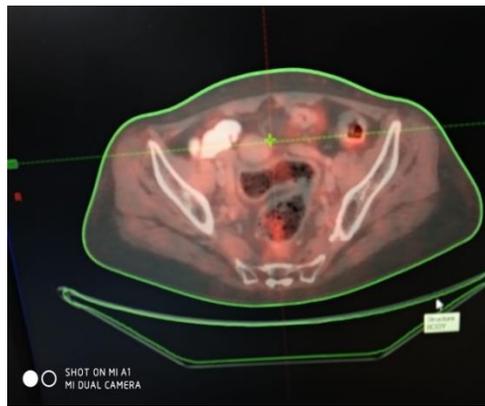


Figure 19



Figure 20

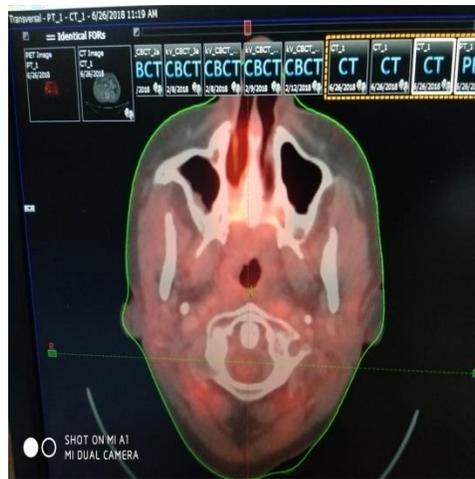


Figure 21



Figure 22

Discussion:

Synchronous malignancies of the cervix and nasopharynx are extremely rare entities and are also difficult to treat. In fact on searching pubmed and the internet, we could not find a single case report of synchronous malignancies in the cervix and nasopharynx. There were case series of synchronous malignancies in the cervix and oropharynx which were probably linked to HPV [1]. There were also case series of synchronous malignancies in the oral cavity, oropharynx, larynx, hypopharynx, esophagus and lung which could have been tobacco induced [2,3,4]. Hence this case was unique with no major guidelines for the treatment of similar cases. However, carcinoma cervix stage IIB is treated with radical chemoradiation followed by brachytherapy [5] and early-stage carcinoma nasopharynx is treated with radical chemoradiation [5]. Hence, this case was treated upfront with radical Chemoradiation rather

than delaying radical treatment with neoadjuvant treatment especially if the disease is early stage. Also, this case highlights the use of modern conformal techniques in reducing the toxicities and making synchronous treatment of two different sites feasible. Another notable point to be noted in this case is the altered fractionation used in the case of carcinoma nasopharynx @ 2.2 Gy/fraction to a total dose of 66Gy/33 fractions while the cervix was treated to a total dose of 50.4 Gy/28# @ 1.8Gy/#. This ensured that both the treatments were completed almost in the same time frame, their toxicities developed at the same time and could be managed concurrently. Also, the concurrent chemotherapy cycles of cisplatin (used in both sites) could be scheduled every week with the patient tolerating them well and no major complications of neutropenia. Also completing the nasopharyngeal treatment in 6 weeks ensuring that the brachytherapy was not delayed to a great extent due to decreased oral intake and poor general condition of the patient.

Conclusion:

This case presents an example that synchronous malignancies of the cervix and nasopharynx can be treated at the same time with Radical Chemoradiation with the patient tolerating the treatment well with good compliance.

References:

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