Case Report

Multiple primary carcinoma in post renal transplant immunocompromised patient-a case report

Abstract

Introduction: Cancer is an important outcome after kidney transplantation because of immunosuppression and it is the second leading cause of death. The excess risk of cancer after transplantation is approximately two to three times higher than the age- and sex-matched general population, driven largely by viral- and immune-related cancers.

Case presentation: 68 yr old male with single transplanted kidney and no tobacco habit presented with multiple primary malignancy over 8 yr period from carcinoma soft palate, carcinoma rectum and Hepatocellular carcinoma.

Diagnosis: Patient underwent Radiation alone for softplate carcinoma, Surgery followed by chemo radiation for carcinoma rectum and Hepatocellular carcinoma. Patient on follow up PET CT and MRI have no active disease

Conclusion: Carcinoma incidence is inevitable for renal transplant patient. With multimodality approach of surgery, Radiation and chemotherapy patient having a better quality of life

Keywords: Renal transplant, Carcinoma, Radiation

Volume 11 Issue 1 - 2024

Sasikala Prabaharan, Srinath Sowry, Shalini, Ramesh S Bilimagga
Health Care Global Cancer Care Hospital, India

Correspondence: Dr. Sasikala Prabaharan, Health Care Global Cancer Care Hospital, 405 ATZ properties, Rachanahalli main road ,Thanisandra, Bengaluru, Karnataka 560045, India, Tel 809589322, Email drsasisubb@yahoo.co.in

Received: February 02, 2024 | **Published:** February 26, 2024

Introduction

Cancer is an important outcome after kidney transplantation because of immunosuppression and it is the second leading cause of death. The excess risk of cancer after transplantation is approximately two to three times higher than the age- and sex-matched general population, driven largely by viral- and immune-related cancers. Post-transplantation cancer screening needs to be tailored to the individual patient, considering the cancer risk of the individual, comorbidities, overall prognosis and the screening preferences of the patient. In kidney transplant recipients diagnosed with cancer, treatment includes conventional approaches, such as radiotherapy and chemotherapy, together with consideration of altering immunosuppression.

Case presentation

68yr old male who underwent Right kidney transplant for non-functional bilateral kidney presented in with carcinoma of soft palate cT2N0M0.PET CT scan without contrast revealed 1x2x2.7cm soft tissue density mass in the right soft palate and perialveolar region in right upper third molar suggestive of carcinoma soft palate extending to alveolus with suv 3.5 as shown in Figure 2. Biopsy revealed squamous cell carcinoma, for which he was treated with Radiation using Intensity modulated radiation therapy (IMRT) to the dose of 70Gy in 35 fraction over 7 weeks with weekly 5 fraction. In Figure 1 the 70Gy dose distribution was shown in colour wash over the gross disease. Chemotherapy was not considered because of renal compromise and it was stage 2 disease. Patient had complete response of the disease and was on regular follow up.

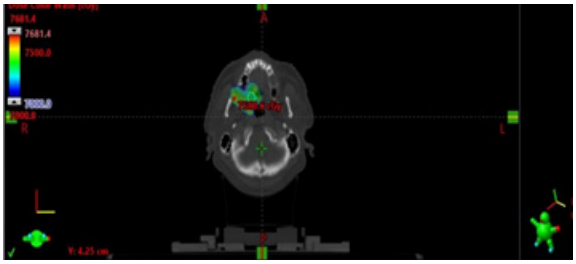

Figure 1 Dose distribution of the soft palate and Alveolus.

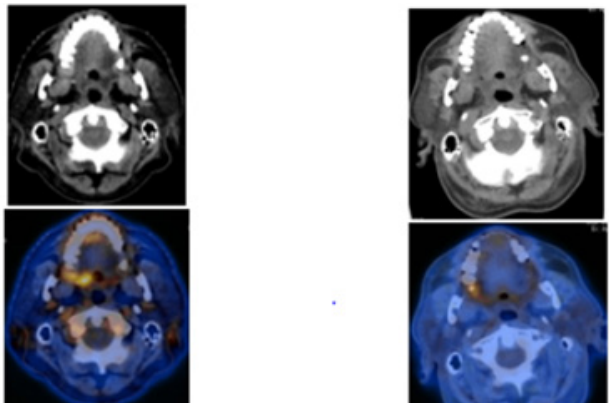

Figure 2 Pretreatment and post radiation treatment PET CT.

After 6 yrs patient again presented with bleeding per rectum for which he was evaluated with PET CT scan without contrast revealed metabolically active circumferential wall thickening in the rectosigmoid junction extending into upper rectum. Non FDG avid pericolonic nodes and liver lesions of Segment V: 2.9x2 cm and Segment VI: 2x1.6cm Colonoscopy revealed large ulceroproliferative growth of the rectum and recto sigmoid biopsy was taken. Large tubulovillous adenomatous looking polyp in the distal sigmoid at 30cm. Multiple diminutive colonic polyps in the ascending colon, biopsied, Transverse colon polyp excised. MRI Abdomen showed 2 well defined T2 hyperintense lesions with restricted diffusion in right lobe of liver – Suggestive of metastases. He underwent Diagnostic Laparoscopy + Laparoscopic Liver Metastasectomy and Low Anterior Resection.

Postop histopathology of liver showing moderately differentiated hepatocellular carcinoma and Rectum showing moderately differentiated adenocarcinoma of rectum with free margins and free regional lymph nodes with perirectal tumor deposits pT3N1c. He received adjuvant external beam radiotherapy in view of T3 and node positive using Image guide radiotherapy (IGRT) to a dose of 45 Gy in 25 fractions to the post op bed and nodes in pelvis followed by

5.4 Gy in 3 fractions boost to the post-operative bed as shown in Figure 3 along with concurrent chemotherapy with oral capecitabine The patient received stereotactic body radiotherapy(SBRT) using CyberKnife to a dose of 30 Gy in 5 fractions to postop bed of liver using gold fiducial and synchrony respiratory tracking as shown in Figure 4. SBRT to liver considered in view of close margin 2mm. now on one and half year follow up whole body PET scan as shown in Figure 5 revealed no active disease and patient have a good quality of life.

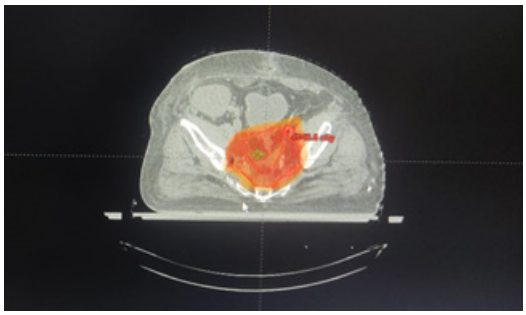

Figure 3 Dose distribution of carcinoma rectum post-operative bed.

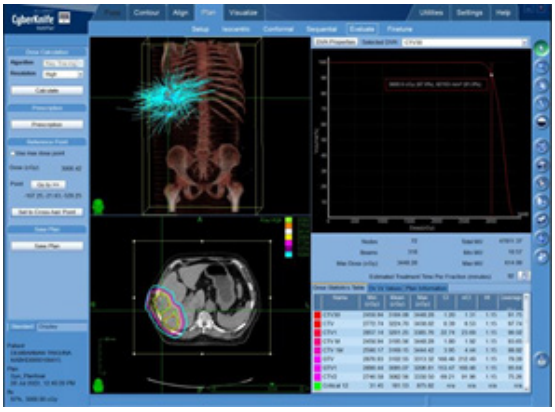

Figure 4 SBRT plan for liver lesion.

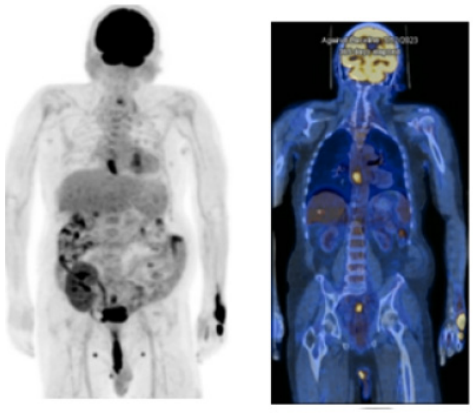

Figure 5 Current whole Body PET CT.

Discussion

In post renal transplant patient there is a possibility of carcinoma because of immunosuppression.so in our case the patient had 3 primary carcinoma soft palate, carcinoma rectum with synchronous Hepatocellular carcinoma since patient had multiple colonic polyp along with carcinoma there was a possibility of lynch syndrome in which mutation of MLHI and MSH2 gene occur. Because of mutation there will be DNA replication error. As the abnormal cells continue to divide, the accumulated errors can lead to uncontrolled cell growth and possibly cancer.Even with 3 primary patient had good clinical outcome because of the multimodality approach of surgery, Radiation and oral chemotherapy. With advancement in Radiation technique with IMRT and stereotactic radiotherapy patient had better tumour local control and good quality of life without acute or late toxicity of radiation.so in Renal transplant patient who had malignancy should have stringent follow up protocol once in 3 months so that any new primary can be detected in earlier stage and treated.[1-5]

Conclusion

In our report the renal patient had multiple primary malignancy for which he was treated with multimodality approach of surgery radiation and chemotherapy. Possibility of Lynch syndrome was considered which is associated with other malignancy like stomach, small intestine, gall bladder, urinary tract, brain and skin.so patient need close surveillance to detect any other malignancy.

Acknowledgments

Nil.

Conflicts of Interest

Nil.

References

1. Al–Adra D, Al–Qaoud T, Fowler K, et al. *De Novo* malignancies after kidney transplantation. *Clin J Am Soc Nephrol.* 2022;17(3):434–443.
2. Au E, Wong G, Chapman JR, et al. Cancer in kidney transplant recipients. *Nat Rev Nephrol.* 2018;14(8):508–520.
3. Kastrinos F, Syngal S. Inherited colorectal cancer syndromes. *Cancer J.* 2011;17(6):405–415.
4. Gerum S, Jensen AD, Roeder F. et al. Stereotactic body radiation therapy in patients with hepatocellular carcinoma: A mini–review. *World J Gastrointest Oncol.* 2019;11(5):367–376.
5. Huang YX, Lin YZ, Li JI. et al. Role of postoperative radiotherapy in pT3N0 rectal cancer: A risk-stratification system based on population analyses. *Cancer Med.* 2019;8(3):1024–1033.