

DOUBLE MALIGNANCY OF RECTUM AND KIDNEY: A CASE REPORT

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Abstract: *The incidence of multiple primary cancers have increased in the recent years due to improved prognosis and increasing age of the population. Co-existence of two malignancies is high in patients of lymphomas, RCC (renal cell carcinoma), as well as melanomas, lung/bronchus carcinomas¹. Although both cancers of the rectum and kidney are common malignancies, the incidence of ex-existent renal and rectal primary tumors is unclear². Second primaries are not frequently associated with colo-rectal cancer. Synchronous lesions may be treated simultaneously without significant morbidity. Hence, the concerned renal lesions are usually detected during the workup for colorectal cancers. A case of synchronous rectal and renal malignancy is being reported here.*

Key words: *double malignancy, colorectal cancer, renal cell carcinoma.*

INTRODUCTION

Warren and Gates¹ defined multiple malignant tumors as follows:¹ each tumor must be clearly malignant as determined by a histologic evaluation²; each cancer must be geographically separate and distinct³; the possibility that one is a metastases of the other must be ruled out.

There have been many reported cases of double malignancies involving GI tract, but the occurrence of synchronous malignancies involving rectum and kidney is relatively rare. Onishi et al⁴ detected 38 cases with double cancers among 804 patients of RCC, among which gastric cancer was most frequent. Capra et al³ reviewed 781 consecutive patients operated for colorectal carcinoma, 3 (0.4%) of these had synchronous renal cell carcinoma; latter was invariably asymptomatic. Halal et al recommended the routine use of pre-operative imaging studies to exclude synchronous asymptomatic renal lesions in patients with colorectal cancer because 5 cases of RCC were detected among 103 colorectal cancer patients (4.9%)³ In these patients, staged renal and colonic resection are usually performed, but simultaneous resection should be prepared if possible. Reviewing 10469 cancer patients in the literature, demandante et al. revealed a mean incidence of multiple primary malignant tumors of 3.9% (ranging between 0.734% and 11.75%). Cullinane et al², reported 3.8% incidence of asymptomatic renal neoplasms in 182 patients of rectal carcinoma; ⁴ synchronous resection and three patients underwent staged renal and rectal resections. RCA in 6 revealed oncocytoma in one patient rectal lesions were all adenocarcinomas and all were within 10 cm of the dentate line. Patients over 65 years of age had a significant lower risk of multiple primaries, were as young breast cancer patients had significantly higher risk. Male lung cancer patients had a significantly reduced observed/expected O/E± 0.2 ratio for stomach cancer and a three fold increased risk of kidney cancers⁶. According to Japanese Pathological Society, 1996, the incidence of multiple primary cancers was estimated to be 13%. Family with characteristic lynch syndrome II have been shown to

manifest a spectrum of cancers including those of the small bowel, stomach, pancreas, bile duct, kidney, ureter, uterus, and cervix^{7,8}. Tumors of the genitourinary tract have been described along with tumors of the breast, respiratory tract, and lymphatic system. Patients with multiple primary malignant lesions in different organ system possess an enhanced susceptibility to other neoplasms. Frequent replication errors at microsatellite loci have been described in tumors of such patients.

Patients with multiple cancers have been rarely reported in our country; we report a case of synchronous malignancies involving rectum and kidney in a young male.

CASE SUMMARY

47 years old married, muslim male presented with the history of bleeding per rectum and increased frequency of stools for 8 months. A colonoscopic guided biopsy was done and diagnosis of mucinous adenocarcinoma of rectum was made. The tumor was well differentiated and was infiltrating in to the serosa. During surgical workup, a CT Scan of abdomen was done which showed a circumferential lesion in mid portion of rectum about five centimeters in length with evidence of polypoidal appearance and mucosal ulceration. An unusual, contrast enhanced well defined lesion having regular margins and measuring 5.7 x 5.2 cm was seen in lower pole of left kidney. Lesion was extending inferiorly just proximal to the level of aortic bifurcation and displacing bowel loops. Laboratory studies revealed normal blood counts and biochemical profile. Metastatic work up was found negative. Surgery was undertaken and an abdomino perineal resection of the rectal lesion with sigmoid colostomy was done. At the same time, patient underwent left sided radical nephrectomy. Post operative period of the patient was uneventful. Post operative histopathology suggested well differentiated mucinous adenocarcinoma with serosal infiltration in the rectal specimen. The lesion was present 6.5 cm from the anal margin and 2 out of 5 isolated lymph nodes were positive (pT3 pN1). The specimen labeled as kidney showed clear cell type renal cell carcinoma 5 cm in size, invading beyond the renal capsule. Invasion of perirenal fat was present (pT3a pN0) The serum creatinine was 1.90 mg/dl. Patient was started on chemotherapy two cycles with Inj. 5 FU 425 mg/m² i.v. bolus, day 1-4 and Inj. Leucovorin 20 mg/m² i.v.

bolus, day 1-4 at an interval of three weeks were given. Patient tolerated chemotherapy well. Patient was then planned for *pelvic irradiation* 45 Gray in 25 fractions over five weeks with one anterior and two posterior oblique fields. Last four fractions of radiation were given concurrent with same chemotherapy regimen. It was followed by boost irradiation to rectum i.e. nine Gray I five fractions over one week. Patient tolerated radiation well. There were only grade 2 skin reactions and grade 2 intestinal toxicity (RTOG) acute radiation morbidity scoring criteria.)

Following this patient was given a treatment gap of two weeks and was planned for radiation to the renal bed. Thirty Gray in 15 fractions were delivered over three weeks taking care in avoiding hot spots in the previously irradiated field. Patient tolerated radiation well. Patient was then started on the maintenance chemotherapy with the same drugs and doses as used prior to radiation. He was given three such cycles. Patient is subjectively better now and is on regular follow up after one year from the date of completion.

DISCUSSION

The present case met all the criteria stated by Warren and Gates with different histopathologic findings for each tumor. Simultaneous primary malignant tumors are a subclass of synchronous primary malignancies and are defined as those separate malignancies. Which are diagnosed at the same time. In our patient, since the interval between detection of the two primaries was less than six months, they corresponded to synchronous lesions as per criteria laid down by Mortel et al. the

possible causes for development of multiple malignancies include reduced immunological competence, constitution, genetic factors exposure to chemotherapy, radiation exposure surgery, or smoking may have contributed to the development of these malignancies. Our patient is at risk of developing recurrence or metastases from each lesion as well as for the development of a third cancer. So, this patient needs strict monitoring. In such patients, it is necessary to follow up, not only for recurrence but also for the development of cancer in other organs, by establishing individual diagnostic and treatment strategies.

In *conclusion*, a better knowledge of the relationship between simultaneous malignancies in various organs may lead to earlier detection of second primary cancers and improved therapeutic outcome.

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