

COLORECTAL CARCINOMA WITH RIGHT RENAL ONCOCYTOMA ALONG WITH VESICULAR CALCULUS AND RIGHT PANTALOON INGUINAL HERNIA

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Abstract:

Synchronous multiple primary tumours defined as two or more distinct primary tumours diagnosed within six months of each other, are uncommon clinical entities. The concurrent occurrence of colorectal adenocarcinoma and renal oncocytoma is particularly rare, with limited cases documented in the literature. In this report, we describe a case of a 74/M who presented with 20 years history of right inguinal hernia and 6 months history of on and off constipation. On further investigations like USG and CECT of the abdomen and CT Urogram, three other diagnoses were revealed which were- Renal Oncocytoma, Bladder calculus and Rectosigmoid carcinoma. Histopathological analysis confirmed the diagnoses. This case underscores the importance of comprehensive diagnostic evaluations and multidisciplinary management in patients presenting with Multiple primary tumours. The patient underwent multiple procedures for the same. This report highlights on Multiple primary tumours and Synchronous tumours and how to manage these conditions.

INTRODUCTION

Colorectal cancer (CRC) is a common malignancy and cause for death around the world. In India, it ranks as the fourth most incident cancer in both sexes, with 64,863 cases and 38,367 deaths in 2022. With such high mortality, CRC survival in India is way lesser than that of developed countries. While western countries are facing an overall decline in CRC incidence, various regions in India are seeing an increasing trend. Within India, urban regions have markedly higher incidence than rural. Colorectal cancer (CRC) is the third most incident type of cancer, worldwide, following lung and prostate in males and breast and lung in females. Over 1.9 million CRC cases occurred globally in 2022. Additionally, 881,984 deaths occurred due to CRC. CRC contributes to more than 9% of the world's cancer incidence and mortality.

Renal oncocytomas are common benign kidney neoplasms that account for 3 to 7 percent of renal neoplasms. They usually occur in adults, most frequently in the seventh decade of life. Renal oncocytomas may be discovered incidentally or may be diagnosed with biopsy or excision. Renal oncocytomas usually have an excellent prognosis and are not associated with an aggressive clinical course; however, there can occasionally be metastasis to liver and bone and fatalities have occurred.

Multiple primary tumours defined as the occurrence of two or more distinct primary malignancies in an individual. These are usually very uncommon phenomena. Synchronous tumours, where tumors are diagnosed simultaneously or within a six-month interval, are particularly rare. The coexistence of rectosigmoid adenocarcinoma and renal oncocytoma is exceptionally uncommon, with limited cases documented in medical literature. An increasing number of such cases are being diagnosed, attributed to advancements in diagnostic techniques, longer life expectancies, and improved survival rates among

cancer patients. Globally, the frequency of multiple primaries ranges from 2–17%, though data from India is limited. While colorectal cancer is common worldwide, its concurrent presentation with other malignancies, such as renal tumors, is rare.

This case involves a 74-year-old male diagnosed with two distinct primary cancers: rectosigmoid adenocarcinoma and renal oncocytoma.

Case report: The following case is of a 74 y/o male with a history of diabetes, hypertension, and COPD, presented with a 20-year history of right inguinoscrotal swelling, with recent increase in size in the past two months. He also complained of constipation and increased urination

frequency for past 2 months. Examination revealed a non-reducible complete right inguinal hernia and grade 3 prostatomegaly. Lymphadenopathy was present over the right inguinal region (mobile, non tender). External genitalia: Penis pushed to the left and B/L testis palpable.

USG imaging showed A heterochoic lesion of size 2.8x3.2cm noted in interpole cortex with internal cystic changes noted with peripheral vascularity and minimal internal vascularity. Pre void of 270cc and Post void-180cc showing significant PVR. A hyperechoic calculus of size 3.3cm noted within the bladder lumen. Multiple few free floating echos noted in the bladder and wall appears irregular and thickened.

CECT Abdomen and Urogram was done which revealed the double malignancy:

1. A solitary fairly defined partly exophytic lobulated, heterogeneously appearing ball type lesion noted epicentred in interpole cortex of right kidney- 3X3.3X3.1cm- Likely renal cell carcinoma or Oncocytoma.

2. Circumferential, irregular, edematous mural / wall thickening seen involving the distal sigmoid colon and recto-sigmoid junction with features as described- Features suggestive of neoplastic malignant etiology.

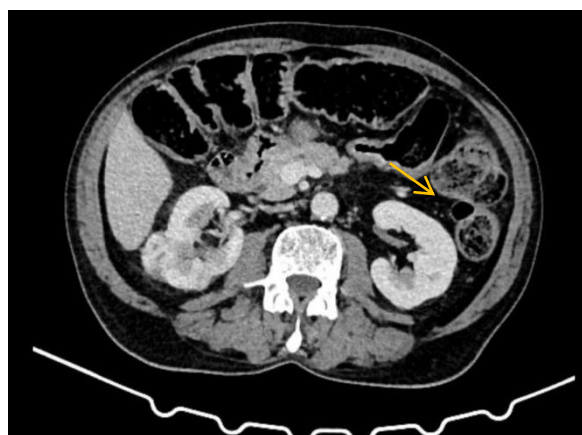
Colonoscopy revealed a circumferential proliferative growth 20cm

from the anal verge located at the distal sigmoid colon and rectosigmoid junction with significant lumen narrowing, and a biopsy taken from the lesion confirmed well-differentiated adenocarcinoma.

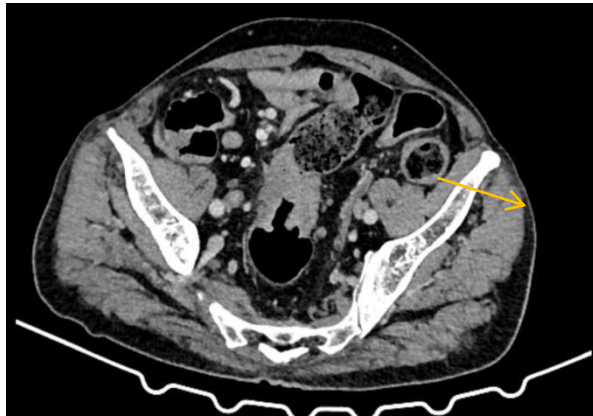
Serum CEA was also found to be elevated- 19.8ng/mL



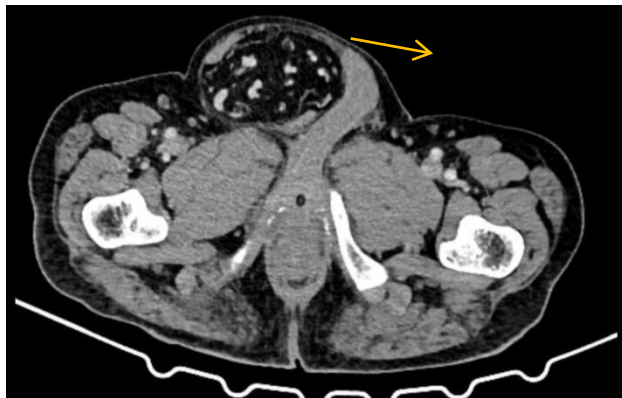
BLADDER CALCULUS



RENAL ONCOCYTOMA



RECTOSIGMOID GROWTH



RIGHT INGUINOSCROTAL HERNIA

The patient underwent a complex surgical procedure involving: Low anterior resection + Right hemicolectomy+ distal ileal resection+ Ileotransverse anastomosis + Colorectal anastomosis + Loop ileostomy (with proximal ileum) + Right total nephrectomy + Right herniorrhaphy.

Intra operative findings included:

1. Proliferative growth in the rectum involving ileum and right distal ureter.
2. Small bowel (distal ileum) was also involved
3. Right kidney tumour present in midpole
4. Right sided pantaloon hernia

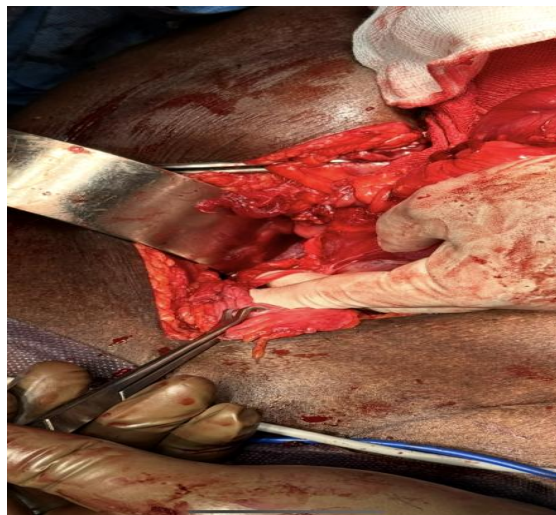
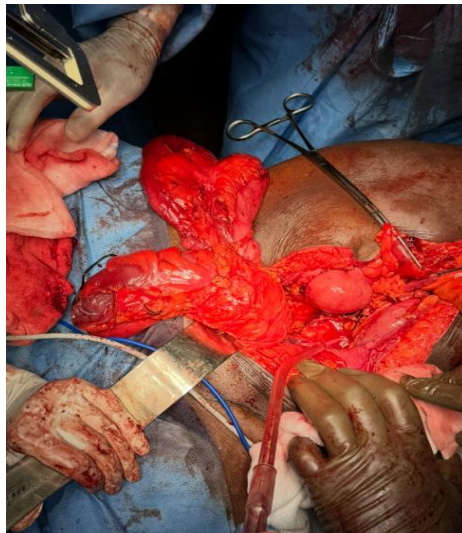


RIGHT HEMICOLECTOMY + DISTAL ILEAL RESECTION+ LOW ANTERIOR RESECTION SPECIMEN



RIGHT TOTAL NEPHRECTOMY

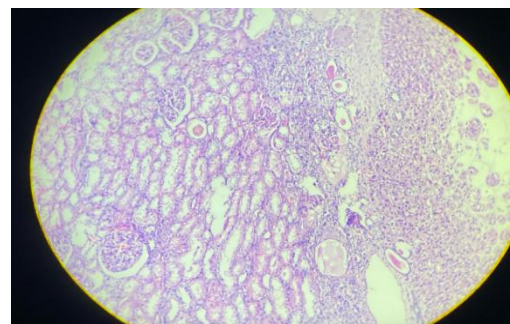
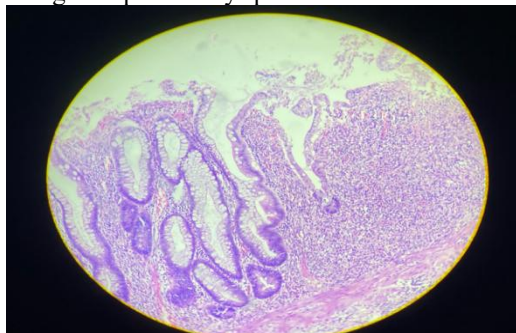
INTRAOPERATIVE PICTURES:



Postoperatively, patient was managed in the ICU by a multidisciplinary team and recovered well.

Histopathological examination showed:

1. LAR specimen: Features of Well differentiated Rectosigmoid Adenocarcinoma- pT4b pN2a. All margins negative for invasive carcinoma. No of lymph nodes with tumor : 4/6 Portion of ureter in the specimen not involved by invasive carcinoma. Ileal mucosa shows congestion Colonic mucosa shows chronic active colitis with ulceration. One resected end shows low grade dysplasia.
2. Right Nephrectomy specimen - Features of Oncocytic neoplasm, probably low grade oncocytic tumor.



On a later date (34 days after the first surgery), patient underwent procedures: Cystolithotripsy for Vesicular calculus + TURP along with Ileostomy reversal with ileo-ileal anastomosis.

DISCUSSION

In epidemiological studies, the frequency of multiple primaries is reported to be in the range of 2–17%. The synchronous occurrence of colorectal carcinoma and renal oncocytoma is exceedingly rare. Synchronous rectosigmoid adenocarcinoma and renal oncocytoma are exceedingly rare, with an incidence of just 0.4%. Renal oncocytomas are benign epithelial tumors arising from the intercalated cells of the collecting ducts and account for approximately 5% to 15% of surgically resected renal neoplasms. While oncocytomas are typically benign, there is evidence they can metastasize. Surgery remains the primary treatment for such synchronous cancers. The pathogenesis of synchronous multiple primary tumors remains unclear, though genetic predispositions, such as Lynch syndrome, have been implicated in some cases. However, the association between Lynch syndrome and renal oncocytoma is not well established. Comprehensive diagnostic evaluations, including colonoscopy and imaging studies, are crucial for accurate staging and management. With advances and genetic testing patients diagnosed with multiple primaries will be increasingly investigated for an underlying cancer predisposition. A multidisciplinary approach facilitates effective treatment planning and improves patient outcomes and this case highlights the importance of multidisciplinary management in complex cancer presentations.

CONCLUSION

This case underscores the importance of considering synchronous multiple primary tumors in patients presenting with nonspecific symptoms and highlights the efficacy of a one-stage surgical approach in managing such complex cases. Further studies are warranted to elucidate the underlying mechanisms and optimal management strategies for synchronous multiple primary tumors involving rare tumor combinations like Colorectal malignancy with synchronous renal malignancy. Colonoscopy and abdominal CT scan are essential in early diagnosis of these synchronous tumors, given the great advantage of this combination in detecting the tumor, metastases, synchronous lesions, and, consequently, staging. The main treatment for these two pathologies is surgical resection of the affected region with margins free of neoplasms. Finally, simultaneous primary renal and colorectal neoplasms may occur with a higher incidence than expected.

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