

## Case Report

# Synchronous colonic malignancy and tuberculosis: a rare histologic surprise

Agrawal Kavita Khemchand<sup>1\*</sup>, Kaptan Singh<sup>2</sup>, Kim Vaiphei<sup>3</sup>, Lileshwar Kaman<sup>2</sup>

<sup>1</sup>Department of Casualty in Emergency, Postgraduate Institute of Medical Education and Research, Chandigarh, India

<sup>2</sup>Department of General Surgery, Postgraduate Institute of Medical Education and Research, Chandigarh, India

<sup>3</sup>Department of Histopathology, Postgraduate Institute of Medical Education and Research, Chandigarh, India

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### \*Correspondence:

Dr. Agrawal Kavita Khemchand,  
E-mail: [drkavitaagrawal@gmail.com](mailto:drkavitaagrawal@gmail.com)

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## ABSTRACT

Coexistence of colorectal cancer and tuberculosis of same site is described in few of case reports. Tuberculosis (TB) is known to involve any part of the body. Intestinal TB accounts for the majority of extra pulmonary TB, ileocecal region being the most common site. TB has been known to be associated with various types of malignancy. The most common association is malignancy and pulmonary TB. However, association of extra pulmonary TB and malignancy at the same site is relatively uncommon. This case report describes synchronous colonic malignancy and tuberculosis on histopathological evaluation of the resected specimen in a 42-year female patient.

**Keywords:** Adenocarcinoma, Colon malignancy, Tuberculosis

## INTRODUCTION

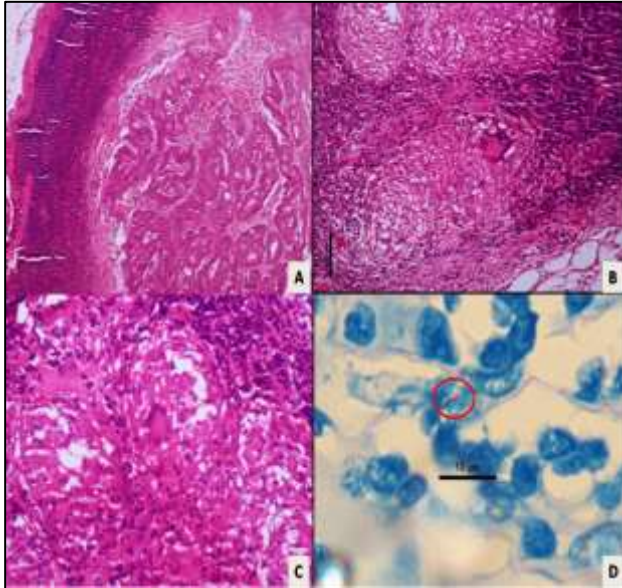
Tuberculosis (TB) is a global health problem, which can involve any part of the body. Majority of extra-pulmonary TB is related to intestinal tuberculosis and ileocecal region is the most common site.<sup>1</sup> Synchronous colonic malignancy and tuberculosis is an uncommon event. Intestinal TB can cause chronic inflammation, but the exact relationship between intestinal TB and colon cancer is currently not well delineated.<sup>2</sup> We report an interesting case of synchronous colon cancer and TB where the diagnosis of tuberculosis was reported incidentally on histopathological examination.

## CASE REPORT

A 42-year woman presented to Outpatient department (OPD) with complaints of intermittent, moderate to severe intensity pain abdomen in the right lower quadrant for one year. Pain increased in severity and intensity over the last month. She also complained of altered bowel habits in the form of increased stool frequency. She underwent

colonoscopy, which revealed distorted anatomy in ileocecal region with cauliflower like polypoidal growth occupying whole of caecum and part of ascending colon. Biopsy showed high-grade dysplasia. Carcinoembryonic antigen (CEA) level was 40 ng/ml. Following this, a contrast enhanced computed tomography (CT) scan was done. CT findings showed presence of marked asymmetric circumferential mural thickening (maximum 2.5 cm) in the caecum and ileocecal (IC) junction causing luminal compromise. Few sub centimetric adjacent lymph nodes were present in the mesentery. Patient underwent right hemi colectomy. A 6×6 cm hard mass was present at the IC junction. Multiple mesenteric lymph nodes were also palpable. There was no evidence of ascites or metastatic peritoneal deposits. Cut section of the specimen showed a fungating growth at IC junction. Histopathological examination revealed moderately differentiated adenocarcinoma. Lymphovascular emboli were absent and the all resection margins were free of tumor. 2/13 lymph nodes were involved by tumor. Three of the lymph nodes showed hyalinized epithelioid cell granuloma consistent with TB. Postoperative recovery was uneventful, and the

patient received a full course of anti-tubercular therapy (category I) for 6 months with 6 cycles of Oxaliplatin + 5 Fluorouracil (FU) + Leucovorin (FOLFOX) chemotherapy concomitantly. Patient was followed up on Outpatient department (OPD) basis every 3-6 monthly. CEA level after 3 months of surgery was 7 ng/ml, which is a good prognostic sign.



**Figure 1: (A) Low power photomicrograph of an involved lymph node by the adenocarcinoma (H and E, ×150), (B) low power photomicrograph of a lymph node showing collections of epithelioid cell granulomas along with Langham type of multinucleated giant cell (H and E, ×150), (C) medium power photomicrograph of a granuloma to highlight the epithelioid cells and Langham type of multinucleated giant cell (H and E, ×3000), (D) oil immersion photomicrograph of the granuloma to show an acid-fast bacillus (highlighted by the red circle; ziehl neelsen stain, ×1000).**

## DISCUSSION

The abdomen is one of the commonest sites of extrapulmonary TB and abdominal TB tends to be a disease of young adults. It typically occurs in the terminal ileum or IC junction where there is an abundance of lymphoid tissue and a high rate of absorption and prolonged stasis, although it has multiple ways of manifesting itself and can affect lymph nodes, any part of the intestinal tract, peritoneum and solid organs.<sup>3,4</sup> The coexistence of the abdominal TB and adenocarcinoma of the colon is rare and it is unclear if it is coincidence or if they predispose to each other. Ileocecal TB is very common in India. However, its association with carcinoma is extremely rare and very few cases are reported from Indian literature.<sup>5</sup> Clinical features of both tuberculosis and cancer may overlap example weight loss, constipation, occult blood in stool. The radiologic picture of an extensive ileocecal region and ascending colon TB may be so dramatic as to mask a

coexisting malignant process if not contemplated. This is especially true in an endemic region where the bias is predominantly in favour of TB.

The association of these two conditions has been a matter of discussion; some authors have suggested that coexistence of the two is more coincidental than causal as the incidence of abdominal TB in low socio-economic condition is far more as compared to very few cases of coexisting TB and malignancy.<sup>1</sup> This argument may be acceptable when the two diseases occur at different sites; however, the simultaneous occurrence of the two at the same site is debatable. According to researchers, any connection between active TB and malignancy is attributed to reactivation of infection in immune-compromised patients suffering from cancer rather than to a cause and effect relationship between infection and neoplasm.<sup>6</sup> Mycobacterium TB is associated with lung cancer, albeit probably not etiopathogenetically. A considerable number of bacterial and parasitic infections are associated with the development of cancer, and further research into these associations with cancer will help in understanding these disease processes and in the development of therapeutic measures to fight these cancers.<sup>7</sup>

## CONCLUSION

The coexistence of TB and carcinoma in the colon may be simply a coincidence. Patients in high incidence parts of the world like India have a higher risk of latent and therefore active TB. Further immunocompromised status of the cancer patients adds the risk of flare up. Therefore, we should be cautious of this when dealing with colon cancer patients.

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