Ganglionar tuberculosis post tumor resection: case report

Abstract

The presentation of lymphatic tuberculosis in the pelvic area is relatively uncommon, which makes diagnosis even more difficult, especially in the context of cancer patients. This case report demonstrate a patient with previous diagnosis of adenocarcinoma of the colon (pT2, pN0, PMX) who underwent rectosigmoidectomy. A few months after the patient complained of weight loss and loss of appetite, which led investigation of recurrence or metastasis. In order to clarify the changes in clinical patient, a CT Positron Emission has been requested, which showed brightness of images in the pelvic region, indicative of lymph node metastasis. A pelvic lymphadenectomy was conducted, showing a fibrofatty tissue exhibiting steatonecrosis, fibrosis and mild inflammation foci, with no atypical cells in the sample. The tuberculin skin test was used, with a strong result (18mm x 15mm), confirming the diagnosis, the patient was then treated with the RIPE scheme (RIF+INH+PZA+ethambutol), resulting in improvement of the symptoms. The differential diagnosis of abdominal lymphadenopathy in a patient after tumor resection involves examining the colon PET scans to assess the avidity of body tissues to capture positrons. However, it is known that PET scans and conventional CT scan detect changes resulting from malignancies such as lymphomas and tumor recurrences, is able to show lymphadenopathy arising from lymphatic tuberculosis, due to the presence of inflammatory cells. In conclusion, it should be considered that patients treated or follow diagnosed with cancer are more likely to tuberculosis than the normal population and therefore positive results of PET scans should be interpreted with caution in the differentiation of benign and malignant lesions, especially in regions with high prevalence of tuberculosis, and must be confirmed by pathological examination before the start of definitive treatment.

Keywords: lymphatic tuberculosis, pet scan, abdominal lymphadenopathy, colon adenocarcinoma, metastasis

Introduction

The lymphatic tuberculosis usually affects the cervical chains, supraclavicular, mediastinal and axillares. His presentation in the pelvic area is relatively uncommon, which makes diagnosis even more difficult, especially in the context of cancer patients. The slimming complaints and often loss of appetite are due to tumor recurrence, but alternative diagnoses are needed to be suspected and searched.

Case report

Patient, 56, female, previously healthy, underwent colonoscopy for malignancy research after occult blood in the stool positive. During the test it was observed findings suggestive of cancer, which was confirmed after biopsy-proven adenocarcinoma of the colon, and infiltrating ulcerated (Figure 1). Subsequently, the patient underwent rectosigmoidectomy performed by laparoscopy, with no significant complications during surgery. The pathological performed from surgical specimens demonstrated the presence of well-differentiated adenocarcinoma, ulceroinfiltrativo type, measuring 3.6 cm in maximum extension without macroscopic perforations (pathological staging: pT2, pN0, PMX). During follow-up performed after surgery, oncology team conducted clinical follow-up and evaluation of the need for adjuvant therapy that was discarded due to the staging. A few months after the patient complained of weight loss and loss of appetite, which led investigation of recurrence or metastasis. Computed tomography was requested (CT) of the chest, abdomen and pelvis, which was observed only expansion of the colon loops in the area of colonic anastomosis and the presence of lymph nodes located in adjacent fat anastomosis enhanced due to the contrast, but with results inconclusive. Images of the chest and abdomen showed no changes.

Figure 1 Colonscopy images depicting ulceroinfiltrative, vegetative lesion with friable surface, located in the sigmoid about 20 cm from the anal verge.

Thus, in order to clarify the changes in clinical patient, a CT Positron Emission (PET CT), which showed brightness of images in the pelvic region, indicative of lymph node metastasis (Figure 2) has been requested. Whereas the rate of recurrence of colon adenocarcinoma in stage I is low (<5%), was chosen for conducting pelvic lymphadenectomy. During the procedure the second aspect of

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The lymph nodes were observed and they had in great numbers, some being adhered to the intestinal surface, brownish - light and fluffy consistency, containing necrotic material inside. Subsequently the pathology report showed the material as fibrofatty tissue exhibiting steatonecrosis, fibrosis and mild inflammation foci, with no atypical cells in the sample. Before the confirmation of the absence of malignant tissue, was suspected of lymphatic tuberculosis due to the macroscopic appearance of lymph nodes examined and the experience of the surgeon who performed the biopsy. Thus, the patient was sent to the local service infectious diseases where opted for carrying out the tuberculin skin test (PPD) intradermally with strong results reactor (18mm x 15mm), which helped to confirm the diagnosis. The patient was treated with the RIPE scheme (RIF+INH+PZA+ethambutol), obtaining a significant improvement of the symptoms.2

**Figure 2** PET CT showing brightness in the pelvic area.

**Discussion**

In Brazil, in 2017, it was reported 69,569 new cases of tuberculosis.3 The proportion of cases with extrapulmonary varies greatly from one country to another, and this variation in America is up to 35%. The lymphatic tuberculosis is one of the most frequent presentations of extrapulmonary tuberculosis, is more common in HIV positive patients, children and people under 40 years, which demonstrates the pathological past the patient and their symptoms. Thus, despite the risk of recurrence of stage I colon adenocarcinoma be considered low, below 5%, it is important to suspect and investigate through imaging and clinical follow-up to confirm the diagnosis.4 The presentation of the most common lymph node tuberculosis in young adults is an isolated chronic lymphadenopathy, more frequent involvement of the anterior or posterior cervical, supraclavicular, axillary and mediastinal. Systemic symptoms are not common but can be found mild fever, weight loss, fatigue and, less frequently, night sweats.5 Physical examination reveals a firm, discrete mass or we set tangled around structures and the overlying skin may be hardened. Unusual findings include fluctuation, sinus drainage or erythema nodosum.6

The lymph node tuberculosis in abdominal compartment typically occurs via ingestion of infected milk or sputum Mycobacterium tuberculosis or M. bovis. Although most cases of lymphatic tuberculosis occur by reactivation of latent infection, the spread of tuberculosis showing granuloma with caseous necrosis in 91-96% besides allowing to evaluate the susceptibility to drugs that will direct the treatment. The amplification of nucleic acids as diagnostic tool comes having space due to its speed, sensitivity and specificity. The GeneXpert using a semi-nested real-time PCR for sequencing the rpoB gene and determine MTB antibiotic resistance to result in 2 hours.6,7

Imaging studies of the chest, such as radiography usually do not show active TB in cases of lymphatic tuberculosis. However, pleural thickening and apical fibrosis suggesting prior tuberculosis can be found on imaging tests. Abnormal findings are more common in HIV patients. With respect to ultrasound, some findings differentiate tuberculosis lymphadenopathy that metastatic as standard involvement of adjacent structures, presence of necrosis, heterogeneity, among others. This examination is hindered when the abdominal site is affected due to the presence of intervening structures and straps.8 The tuberculin test is positive and strong reaction in most patients (74-100%) with tuberculosis, except in immunocompromised patients. However, a positive test is not able to establish the diagnosis.8 Patients who have tuberculous lymphadenitis have high values of leukocytes and lymphocytes, although still within the normal range.9

The differential diagnosis of abdominal lymphadenopathy in a patient after tumor resection involves examining the colon PET scans to assess the avidity of body tissues to capture positrons. However, it is known that PET scans and conventional CT scan and detect changes resulting from malignancies such as lymphomas and tumor recurrences, is able to show lymphadenopathy arising from lymphatic tuberculosis, since inflammatory cells such as neutrophils, lymphocytes and activated macrophages at the site inflammation or infection have a higher accumulation of positrons.10 These tests are used both to identify the lymph nodes involved and to monitor response to treatment in lymphatic tuberculosis.11 According Scapulatempo Neto the presence of lymph node metastasis was associated with the presence of tumor infiltration beyond the proper muscle (T3 or T4), presence of moderate or severe desmoplasia tumor and the presence of lymphatic infiltration, venous or perineural. The presence of liver metastases was significantly associated with the presence of tumor infiltration beyond the muscularis propria and the presence of tumor infiltrating edges. The pathology of the patient in question showed an pT2, which reduces the likelihood of metastases.12

**Conclusion**

The presentation of this clinical case becomes relevant for the age of the patient, the previous history of cancer and infection site. The funding focuses on the region of the patient’s lymph nodes were consistent with the recurrence of the primary cancer but were also consistent with the spread of tuberculosis to the lymph nodes. In conclusion, it should be considered that patients treated or follow.
diagnosed with cancer are more likely to tuberculosis than the normal population and therefore positive results of PET scans should be interpreted with caution in the differentiation of benign and malignant lesions, especially in regions with high prevalence of tuberculosis, and must be confirmed by pathological examination before the start of definitive treatment.

Acknowledgments
None.

Conflicts of interest
Authors declare that there is no conflict of interest.

References