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Synchronous tumor of the rectum and left colon: Case report

Tumor sincrônico de reto e cólon esquerdo: Relato de caso

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ABSTRACT

Synchronous tumors, characterized by the simultaneous presence of neoplasms in different regions or by confirmatory diagnoses separated by up to six months, are generally associated with poor prognosis, especially in the case of colorectal carcinomas, where they present higher mortality and postoperative complications, in addition to requiring a new therapeutic approach and resulting in less favorable clinical outcomes. Colorectal cancer is the most common neoplasm of the gastrointestinal tract, and recent studies indicate that between 15% and 25% of patients with colorectal carcinoma have the condition of synchronous tumors, highlighting their clinical relevance and the need for appropriate approaches.

Keywords: Synchronous tumors, Colorectal carcinomas, Neoplasms.

INTRODUCTION

Synchronous tumors are defined as the simultaneous occurrence of neoplasms in different regions, or with confirmatory diagnoses separated by a period of less than or equal to six months, and generally have worse prognosis; From the point of view of colorectal carcinomas, synchronous carcinomas have higher mortality than solitary tumors, as well as more postoperative complications, recovery failures, the need for a new approach, and unfavorable outcomes1.

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Colorectal cancer is the most diagnosed oncological pathology among malignant neoplasms that affect the gastrointestinal tract (GIT). The most recent studies agree that, specifically in the case of colon and rectal tumors, the discovery of synchronous sites is relatively common, with around 15 to 25% of patients diagnosed with colorectal carcinoma (CRC) having this condition2,3.

There are few more up-to-date texts that address the correlation between the emergence of the primary site and its cause-and-effect relationships in the prognosis of patients with synchronous sites. Until recently, CRC was considered a single entity, and there was no clear mention of the differences in the course of the disease depending on the locations of the metastases and the primary tumor. Only the most recent manuals of some American academies for cancer staging address this complex pathology in an expanded way4.

There is a correlation between the primary site of colorectal neoplasms and the appearance of metastases. Brower et al., 2020, showed in their retrospective cohort that patients with colon-restricted carcinomas, at the time of diagnosis, had greater tendencies to evolve with liver metastases. In the same study, they stratified the precise location of the primarily diagnosed tumor into the right colon, left colon, and rectum; The results showed significant prognostic variation depending on the primary site[2].

The differences between the possibilities of neoplasm evolution depending on the primary site and the tendency for metastases to appear are also addressed by Alexandrescu et al., 2020, who conclude important prognostic variations according to the variables forms of presentation of the binomial "initial site – synchronous". This reinforces the need to identify the correct initial location of the tumor in patients with RCC, already considering the possibility of early onset of synchronous metastasis in more predisposed regions, which may be essential for a favorable prognosis.

Therefore, the objective of this article is to report the clinical case of a 56-year-old patient who was affected by a synchronous tumor of the rectum and left colon, already in the sigmoid region. The diagnosis was aided by imaging and anatomopathological methods, and the patient received surgical treatment to resolve the condition. There will be a comparison between the outcomes found and those expected, according to recent literature on the subject.

CASE REPORT

A 56-year-old male patient sought emergency room complaining of blood in the stool, a condition that began 3 years ago, but had never sought care before. She reported that the family

had a history of neoplasms in the gastrointestinal tract (GIT), the most recent being her sister, who was affected by bowel cancer. On physical examination, the patient was in good general condition, with no notable alterations. A digital rectal examination was performed due to the patient's complaint, and melena was found on the glove finger.

Due to the finding of the digital rectal examination, the attending team chose to admit the patient for laboratory and imaging investigation. He was admitted to a common ward bed, and continued to have complications during the period. The case was discussed with the surgical team, who requested a computed tomography (CT) scan of the entire abdomen initially; The examination showed parietal thickening of the rectal segment, associated with blurring and densification of the surrounding fat, which indicated an inflammatory process and drew attention to neoplasia.

To aid in the diagnosis, a videocolonoscopy was requested, in which an ulcer-infiltrative and friable lesion in the sigmoid colon was visualized, classified by the operator of the examination as Paris type 3, about 30 cm from the anal border, compromising about 75% of the organ's lumen, and also a lesion with the same characteristics, but located in the rectum, from the anal edge and extending for about 8 cm. Because they were in different anatomical sites and had no continuity with each other, the tumors were therefore synchronous.

Given the known prevalence of liver and lung metastases in colorectal neoplasms, a chest X-ray was also requested, which did not show mediastinal lymph node enlargement or any other relevant alterations. Magnetic resonance imaging (MRI) of the pelvis was also performed, which measured the circumferential vegetative lesion of the rectum, measuring 6.2 cm in its longest axis, with involvement of the anal canal. The results of the imaging tests were discussed by the surgeons in charge of the case, who opted for an invasive approach.

The surgery was performed 15 days after the patient's arrival at the emergency department; The procedure performed was an abdomino-perineal amputation, which was uneventful. A margin of 1 cm from the edges of the lesions was maintained. The surgical specimens were referred for anatomopathology after the procedure, which confirmed the safety of the margins and classified both lesions as moderately differentiated, ulcerated and infiltrating adenocarcinomas, which grew to the proper muscle layer (anal canal tumor) and serous layer (sigmoid tumor). The 37 lymph nodes analyzed did not show the presence of metastases.

The patient was referred back to the regular milk in the ward, and remained stable, using only colostomy, symptomatic patients and antibiotic prophylaxis, with no record of complications. An MRI of the abdomen and control pelvis was performed 3 days after the

procedure, which did not show significant changes beyond those expected by surgical manipulation. Given the patient's clinical improvement and the good outcome of the approach, he was discharged for outpatient follow-up 04 days after surgery.

DISCUSSION

There is a consensus that synchronous tumors of the gastrointestinal tract have higher morbidity and mortality than solitary tumors1. Recent studies have revealed that there are substantial differences in the prognosis of patients with synchronous tumors, which are intensified when the location of the initial tumor is taken into account2,5. For a long time, this diagnosis was underestimated, as CRCs were seen as a single entity, and their locations were not taken into account, standardizing approaches and masking the real severity of some cases4.

Considering that the broader understanding of colorectal carcinomas as different entities depending on the initial sites is recent, it is expected that there will not be many meta-analytical studies on the subject; However, several retrospective observational studies have already been conducted, and they seem to agree on several points regarding prognosis, diagnosis, and patient management.

Warps et al., 2021, evaluated the postoperative outcomes for the CRC approach of almost 30 thousand Dutch patients. The researchers found that 4.4% of this sample of patients developed synchronous RCC, with the majority having the second site located in the right colon and only 17.6% in the left colon. It was also evidenced that early diagnosis had a positive impact on the general panorama, however, patients who had synchronous tumors remained with the worst prognosis. A very relevant finding is that patients who presented one of the synchronous sites in the rectum received less adjuvant therapy (chemotherapy, radiotherapy, etc.) and more surgical procedures, also having higher rates of complications and mortality.

Among the studies selected for the literature review of this article, there was a consensus that synchronous RCCs with a site in the right colon have a worse prognosis. Perea et al., 2021, concluded that patients with synchronous carcinomas involving the right colon presented not only clinical but also laboratory differences in relation to patients with tumors in the rectum and left colon. These patients were more likely to develop new polyps over the course of treatment; In addition, genomic alterations and expression of proto-oncogenes were identified in greater quantities in synchronous tumors of the right colon.

A Swedish population-based cohort, with a sample of 238 patients with colorectal carcinomas and hepatic synchronous tumors, identified that patients where the primary site was

in the right colon region had lower survival rates compared to other anatomical regions[3]. Another Swedish study, with a larger sample of 12,201 patients, evaluated the differences between males and females in metastatic surgery after synchronous RCC. In this article, Ljunggren et al., 2022, showed that women were more likely to have at least one synchronous site in the right colon, and in agreement with Olsson et al, patients with CRC in the right colon had lower survival rates.

Ljunggren et al., 2022, also noted that patients who had the right colon as the initial site for CRC had a later diagnosis. It is possible that this diagnostic delay was responsible for the worst outcomes in this group, since other studies show that early diagnosis favors better outcomes[1]. Perea et al., 2021, however, presents a different result; Their clinical-pathological study showed that patients with RCC on the right had earlier diagnoses, due to more pronounced symptoms. Both studies agree on the identification of more genomic alterations in right-sided synchronous tumors.

Regarding the second site, or synchronous site, Brouwer et al., 2020, in their study with a sample of 36,297 patients, identified that, most of the time, the secondary tumor appeared in the liver, except in cases where the primary site was in the right colon; In this case, the secondary site had a greater tendency to arise in the peritoneum. Here, again, it was said that these patients with a primary site on the right had the worst survival rates when compared to patients whose initial tumor had it in another region of the colon or rectum.

Yang et al., 2020, evaluated some health reports from China, where they conducted a retrospective study with 1,902 patients. The researchers showed that clinical reports of patients with multiple primary malignant tumors show an increasing trend in the country, due to the increase in the survival rate, however, the quality of life for these patients is considered poor, given the degree of surgical intervention to resolve the cases, the need for ostomization, among other aspects. The study by Perea et al., 2021, also evidenced a trend towards diagnoses in increasingly younger patients with synchronous RCC, but in Spain.

Disregarding differences between males and females, the 5 most likely regions for the discovery of secondary tumors were, in descending order, breasts, thyroid, nonuterine gynecological tumors, lungs, and colon. The rectal site was the 8th most common for diagnosing the second tumor7. It is almost unanimous the result evidenced in studies that, after the detection of CRC, with a primary site in the colon or rectum, one should wait for synchronous metastases; Yang et al., 2020, recommend starting screening for lung metastases within a maximum of 6 months.

Although the relationship between primary colorectal tumors and their behavior depending on the initial site has been shown to be more predictable than we imagined, the literature still lacks data regarding these correlations. There are few records on cases of synchronous tumors of the colon and rectum, which was exactly the case of the patient whose case was reported here. Based on the literature used, we were able to relate the location of the colonic site to the left as a factor of better prognosis; However, specifically regarding the prognosis of the colon-rectus binomial, there is practically no concrete information.

We conclude that, although it is advancing, this is an area of medicine that needs further studies that allow us to identify the real cause-and-consequence relationships between RCC, its initial sites, its synchronous sites, and the course of evolution of the different combinations that may arise. It is already a fact that right, left and rectal colon carcinomas are completely different entities, both from a histochemical and clinical point of view, and therefore should be treated as such, so that each patient can receive more individualized approaches compatible with the pathology by which they have been affected.

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