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Single Cardiaca Metástasis From Rectal Cáncer Case Report And Literature Review

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1. Summary

Cardiac metastases of rectal origin are rare and carry a very poor prognosis. A few cases have been described in the literature with poor short-term prognosis. Wepre sent a case of a 71-year-old male patient diagnosed with advanced rectal cancer who, after a thorough staging study, showed a cardiac lesion suspicious of malignancy. The study was completed with PET-CT and cardiac MRI and biopsy which supported the diagnosis of metastatic colorectal adenocarcinoma. Based On the review we propose some considerations for the management of the patients taking into account the poor short-term prognosis.

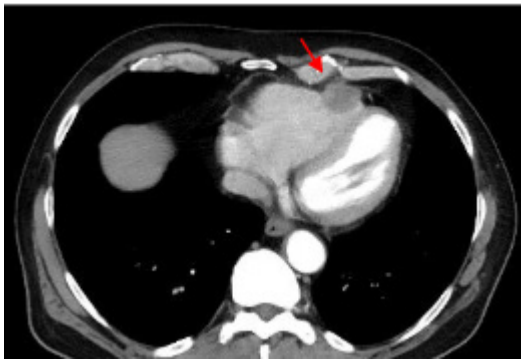
2. Keywords:
Rectal cancer, rectal adenocarcinoma, cardiac metastases.

3. Introduction

Cardiac metastasis sisa unusual finding but its incidence may be underestimated. The primary neoplasms that more commonly metastasize to the heart are me so the liomas, melanomas, lung and breast tumours [1,2,3,4,5]. These me tastsensor malls occur in advanced disease ther than as a single deposit [2,3]. They are usually asymptomatic, but those of bigger size may cause symptoms of cardiac failure or superior vena cava syndrome. The sessions may present with dyspnea, arrhythmias, throm boembolic complications and tumoral thrombosis [1,3,4,5,6]. Cardiac metastases are normally found in the right side of the heart, being the entry chambers of systemic circulation. [1,3,4]. They can be found in epicardium (75,5%), myocardium (38,2%) or docardium (15,5%) [1]. We present a case of a male patient with a rectal adenocarcinoma and a single metastasis to the heart. We carried out a literature review where we identified 9 similar cases, all with a fatal short-term outcome.

4. Case Report

A 71 year old male with no significant past medical history presented with change in bowel habit, fatigue and a 12kg weight loss in 3 months. Per rectal examination revealed a lesion at 10cm from the margin confirmed by colonoscopy which showed eden ulcerated and exophytic mass occupying 2/3 of the rectal circumference. Histopathological analysis reported an adenocarcinoma, positive for MLH-1, MSH-2, MSH-6,PMS-2, CDX2 YCK20. A chest-abdomen-pelvis CT showed a mass of anuncertainorigin in the epicardium of the right ventricle with myocardial extension (picture1).



Picture 1: Axial views of the thoracic CT with iv contrast and obtained in arterial phase. Nodular hyperdense and hypervascular lesions of a solid appearance close to the right ventricle apex (red arrow).

The pelvic MRI reported a neoplastic lesión in midrectum which infiltrated the anterior peritoneal reflexion and the circumferential mesorectal fascia. EMVI+ Grade 4. Stage rt T4aN2M1. To better characterize this lesión we carried out a PET-CT. These Confirmed a neoplastic lesion with pathological 18F-FDG uptake coinciding with the hypodense image measuring 25 x 22 mm in the epicardium and cardiac apex of the right ventricle (picture 2).

Picture 2: PET-CT in axial, sagittal and coronal views, showing hypermetabolism in the lesion.

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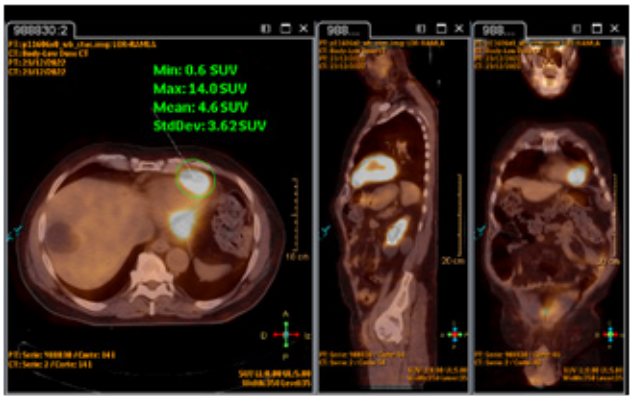
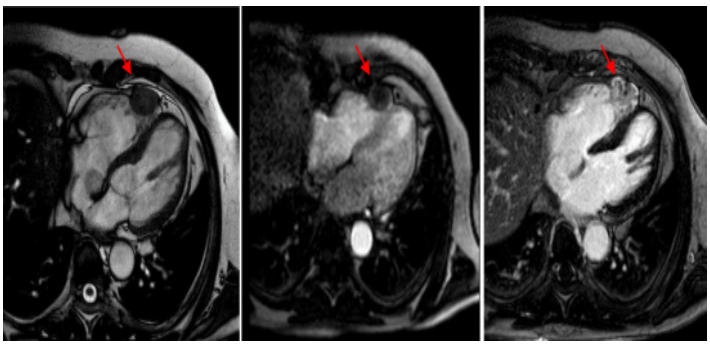


Transthoracic Ultrasound and cardiac MRI confirmed a solid pseudonodular lesion of 36x24x32mm with an epicentre in the epicardial part of the apex of the right ventricle,infiltrating the visceral pericardium and the myocardium (picture 3). Endovascular ularbiopsy was non conclusive hence an open heart biopsy was carried out through a median sternotomy. This Confirmed a colorectal metastatic adenocarcinoma (positive for SATB2+, CDX2+, CK20+, CK7-). Given The Size of the lesion, it was deemed unresectable. Confirmation of metastatic disease began palliative treatment with chemoradiotherapy (FOLFOX-Bevacizumab).



Picture 3: Cardiac-MRI: Identifies a pseudonodular solid lesion measuring 36 x 24 x 32 mm originating in the pericardial region of the right ventricular apex. Infiltrate The visceral pericardium and myocardium and show moderate intracavitary extension. Thislesions shows a hyposignal in CINE 4 camera sequences (3a), dim uptake of contrast of in the periphery of the lesión in the perfusion phase (3b) and a diffuse heterogeneous uptake in late sequences (3c).

5. Discussion

Metastatic Cardiac Tumors Carry a Poor prognosis. If The Metastatic Lesion Is Solitary, oncology treatments (chemotherapy, radiation and/ orresection) of the primary tumour may be considered withanaim of treating orpalliatingthe disease, but the metastatic burden and the volume of disease in these cases are important considerations that often determine the treatment modality. When Evaluating a cardiac mass, the differential diagnosis should include primary cardiac tumors, as well as atrial myxoma, vegetations and thrombi. The Initial Diagnostic test isusuallyan ultrasound supplemented by CT or MRI which provide a better view of the pericardium, myocardial walls and cardiac cavities [4]. Of the 9 cases described, only 3 had single, possibly resectable metastases. One patient passed away during the postoperative period from the cardiac meta statectomy and the others developed diffuse metastatic disease within a few months. All except one died before the first year after diagnosis of the metastases. When faced with a rectal neoplasm with a single cardiac metastasis, one must exercise caution when indicating surgery of the metastatic lesion and only consider surgical resection in very selected cases. Adjuvant treatment of the primary and metastatic lesions may be preferable, given the dismal prognosis of these patients. With the considerations in mind we decided to treat the primary tumour with chemotherapy (Bevacizumab) and radiotherapy we decided against surgical section of the rectum. Currently the patient has presented partial response in the rectum with chemother ap treatment evidenced by CT scan with clear evidence of response in cardiac injury.

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