

# Brain Metastasis Revealing A Colorectal Adenocarcinoma. A Case Report

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## Abstract

Brain metastases are a common manifestation of systemic cancers, far outnumbering primary brain Tumours. Those originating from a colorectal primary are relatively uncommon, with a reported about incidence ranging from 1% to 4%, with an extremely poor prognosis.

We report a case of brain metastasis Discovered at CT scan, revealing a colorectal adenocarcinoma.

## INTRODUCTION

Those Originating from a colorectal primary are Relatively uncommon, with a reported about incidence ranging from 1% to 4%.

The incidence of brain metastasis from colorectal carcinoma (CRC) is increasing [1].

The prognosis of patients with brain metastasis as the only manifestation of an undetected primary tumor is Generally Considered to be poor.

Therefore, most is treatment is palliative [2, 3].

Brain metastasis as the only manifestation of an unknown primary tumor is a distinct clinical entity [4, 5].

We report a case of brain metastasis in the brain CT findings in a patient referred for right hemi-body paralysis in the balance sheet which helped highlight colorectal adenocarcinoma.

## OBSERVATION

We report the case of Mr. JC, 65 years old originally from Guadeloupe, admitted for hemi-body paralysis law gradual onset lasting for one month.

In the antecedents, there are two interventions for perforation peptic ulcer in 1975 and hemorrhoidectomy in 1980.

It is active smoking (30 pack years), ethylic for 25 years.

At the interrogation of his spouse, he presented last year a dry cough initially productive and secondarily reducing the whitish sputum associated with a drawling intermittent fever

with night sweats without chills, weight loss unencrypted.

It is not found notion of contagion tuberculosis.

Physical examination at the entrance include:

- A right pyramidal syndrome
- A delirium with a score of Glasgow (13/15) with retrograde amnesia.
- Bilateral ronchi right predominance.

The constants at the entrance were normal:

- Blood pressure: 130/90mmhg;
- Heart rate: 86 beats / minute,
- A BMI of 20.2.

At the biology, we notice an inflammatory syndrome with leukocytosis 15000GB/mm3 predominantly neutrophils and CRP 48 mg/l.

The tuberculin skin test is positive at 10 mm.

The remaining balance is normal including renal and hepatic function, retroviral and toxoplasma serology, smear, PSA.

The chest X-ray found a bronchial syndrome with interstitial opacities in the right lung base and a course of aortic button.

The CT scan (Figure 1) showed multiple nodular lesions in supratentorial "roundel" that have raised the following hypotheses:

- Brain tuberculomas,
- Brain metastases of neoplasia X
- Cerebral toxoplasmosis.

**Figure 1**

CT scan with injection of contrast. Multiple nodular lesions in the brain with “rosette” enhancement. Notice the important peri-lesional edema at left cerebral hemispheric.



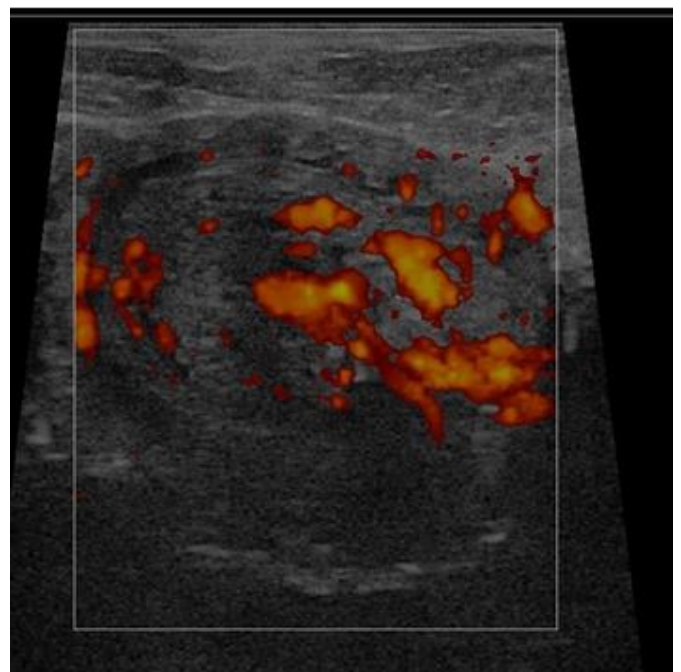
**Figure 2**

Abdominal ultrasound.



**Figure 3**

Circumferential wall thickening of the sigmoid colon with a color Doppler vascularity.



So, the tuberculosis treatment was started.

The abdominopelvic ultrasound shows wall thickening of the rectum and sigmoid with a rosette appearance on transverse sections, one aspect "sandwich" on longitudinal sections hypervascular color Doppler making evoke a malignant colorectal tumor (Figures 2 and 3).

This is supported by the Thoraco-abdominal-pelvic CT scan found that in addition to mediastinal lymph node suggestive of secondary locations (Figure 4). The lower endoscopy found rectal congestive ulcerated area by requiring biopsies that showed only nonspecific mucosal inflammation.

**Figure 4**

Abdominal Scan CT in axial slice. Parietal thickening of the colon wall Daughter suggestive of colonic tumor.



Tuberculosis treatment was continued during hospitalization because of 4 tablet per day RHZE associated synactene, one injection twice days.

On leaving, the patient feels partial myoclonus taking intermittent right side of the body about 2 to 3 minutes without tongue biting or loss of urine requiring the addition of tegretol 200 lp (1 tablet / day twice a day).

A second biopsy revealed a colorectal adenocarcinoma.

The short-term trend is marked by a deterioration of the general condition, an increase in brain damage to the control CT scan.

The patient's prognosis was very bad, given the late stage at which the tumor was discovered.

The removal of the tumor could not be made because of the poor condition of the patient and non-consent of the family. Only symptomatic treatment has been proposed.

### DISCUSSION:

Colorectal carcinoma (CRC) is the third most commonly diagnosed cancer in males and the second most common in females worldwide.

The main causes of failure are treatments for local recurrence and distant metastases, especially when vital organs: such as liver and lung are involved through hematogenous dissemination [1, 2].

Brain metastasis is a much less common purpose and is more fatal phenomenon usually considered as the late-stage

event for CRC.

Compared with other malignancies: such as lung cancer, breast cancer, and melanoma, the incidence of brain metastasis from CRC is considerably rare. Merely 0.3% to 9% of patients with CRC May Develop brain metastasis or synchronically heterochronically, representing only 4% to 6% of all brain metastasis cases [1, 2].

Nervous system metastasis mainly reach the brain parenchyma (cerebral hemispheres: 80 to 85%; brainstem and cerebellum: 10 to 15%).

The propagation paths of the CNS are manifold.

Hematogenous route, blood is the most common, which is the usual topography of brain metastases, the limit of arterial territories, and at the junction of gray-white substance, seat of a sharp reduction in the size of capillaries.

Systemic cancers are most frequently involved. These cancers of the respiratory tract (35 to 50%), breast (15-20%), kidney (10%) of the gastrointestinal tract (5%) and melanoma (10.5%) [3,4,7,9].

In more than 10% of cases, no primary cancer is found; metastasis may even be the only manifestation of an unknown cancer. It is possible that the intravenous be involved in the spread of metastases in the posterior fossa from the spinal venous plexus.

The lepto-meningeal locations are through blood or are secondary to spread via the cerebrospinal fluid (CSF) dural locations resulting from hematogenous spread or invasion from the bones of the skull.

The breakdown of the blood-brain barrier (BBB) is also at stake.

The blood-brain barrier (BBB) is Formed by a complex system of endothelial cells, astroglia, pericytes, with continuous tight junctions that restrict the way MOST of circulating cells, bioactive molecules, and therapeutics.

The intracranial disorder can result from peri-neural extension or the foramina of the skull base (ENT tumors).[8,10].

A CT scan, metastasis have the same or slightly lower density than the brain parenchyma, and in the absence of indirect signs (edematous reaction, ventricular compression and subarachnoid spaces) are not usually visible on a CT scan without injection of contrast.

They are hyperdense when the seat of haemorrhage or

calcification and if hypercellular tumors, high nucleocytoplasmic ratio (lung cancer, small cell lymphoma, melanoma).

The enhancement after injection of contrast is intense and various aspects are observed: contrast enhancement punctate, nodular or homogeneous ring generally irregular, if necrotic metastases. Pure cortical involvement is rare, the lesions are so small, without edema or edema with very little reaction and are only visible after injection.

Because its high frequency, the diagnosis of metastasis is to evoke in front of any lesion contrast. Indeed, the specificity of the imaging remains relatively low and the clinical history may be the most reliable diagnostic element [7, 8, 9].

Our patient had brain metastases on CT as multiple nodules above-tentoriels spontaneously hypodense on the series without injection and nodular images in "rosette" after injection of contrast.

The differential diagnosis arose with especially with brain tuberculomas and cerebral toxoplasmosis.

The negativity of the retroviral and toxoplasmic serology, the absence of other signs suggesting tuberculosis despite a positive intra-dermoreaction but also the discovery of a colorectal tumor process (ultrasound and CT) confirmed by biopsy allowed to retain diagnosis of brain metastases of colorectal adenocarcinoma.

The removal of the tumor could not be made because of the poor condition of the patient and non-consent environment.

Only symptomatic treatment has been proposed.

The patient's prognosis was very bad marked by the death of the patient,

#### **CONFLICT OF INTEREST:**

The authors declare no conflict of interest.

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