

Case Report

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Liver Metastases and Peritoneal Carcinomatosis in A Sigmoid Adenocarcinoma Should We Perform Colectomy in A Stage IV Colorectal Cancer?

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Abstract

Colorectal cancer is the second cause of death in Spain (20% diagnosed in stage IV), improving survival in recent years thanks to chemotherapy and metastatic surgeries.

With regard to a patient diagnosed with native stage IV KRAS colon adenocarcinoma (peritoneal, hepatic), the subject of cytoreduction with HIPEC (intraperitoneal hyperthermic chemotherapy) and the factors that influence the tumor response are reviewed.

Introduction

Colorectal cancer is the second cause of death in Spain, despite improving local and systemic treatment (nowadays metastatic colorectal cancer has achieved a 5-year survival of 50%). However not all the patients can receive these treatment, so we have to improve and select those who can benefit from antiangiogenics and hyperthermic peritoneal cytoreduction (HIPEC). Therefore, it is very important to decide the best sequence of treatment in a Multidisciplinary Tumor Committee and to know more about molecular factors to help us to choose between different chemotherapy agents, so investigation and clinical trials are key.

Clinical Case

A 57 years old woman with no personal history to note went to the Emergency Department in October 2016 due to abdominal pain of a week of evolution. Physical exploration showed abdomen distended, without hydro-aerial noise and signs of peritoneal irritation. We performed a CT (26-10-2016) which showed a extensive peritoneal carcinomatosis, ascites and possible liver metastases. Intestinal perforation, probably related to tumor in the left colon (Figure 1).

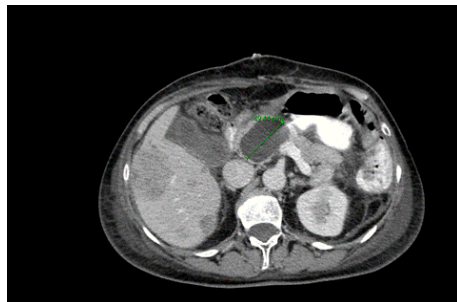


Figure 1: Liver metastases in the diagnosis.

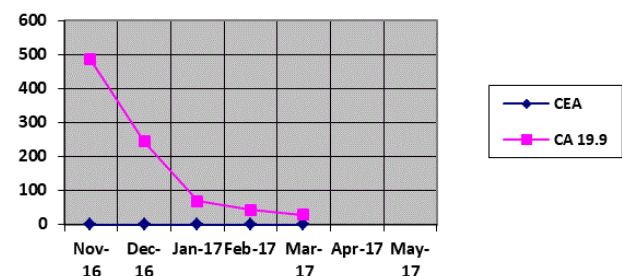
With these findings, differential diagnosis is between:

- Peritoneal carcinomatosis secondary to digestive/gynecological tumor process.
- Hypodense liver lobes, suggestive of metastases of colorectal origin (not hypervascular, so it does not suggest neuroendocrine origin).

Afterwards, urgent surgical intervention was decided in which extensive carcinomatosis with estimated Peritoneal Carcinomatosis Index (PCI) of 32 points was found, as well as 2 liver LOEs greater than 5 cm in segments VII and VIII.

*Colectomy: Adenocarcinoma of colorectal origin pT4b N2b (22/24) M1b L1V1Pn1 KRAS/NRAS/BRAF negative.

Given the extensive unresectable tumor disease, chemotherapy is initiated with palliative intent (FOLFOX+Cetuximab) on day 18-11-16. Good tolerance, highlighting only skin rash grade 1. It covers 4 cycles until 04.01.17 with improved levels of markers tumors (Graph 1) and partial tumor response on CT (>50% in size of liver metastases and peritoneal implants).



Graph 1: Tumoral colorectal markers.

The same chemotherapy scheme continues, but in the 8th cycle (March 2017) there is a worsening of rash to grade 2-3 in the

periorbital area and grade 2 transaminitis. Due to dermatology toxicity, doxycycline is initiated.

Restarts treatment with dose reduction of 20% of cetuximab and oxaliplatin. Partial response on CT (03-05-17, Figure 2) so it is presented in Multidisciplinary Committee of Carcinomatosis and cytoreduction is decided (28-06-17) as well as limited resection of segment 5 + Radiofrequency segments 5 and 6 + left nephrectomy + Hyperthermic Chemotherapy with cytoreduction. Initial PCI was of 8 points and the degree of cytoreduction=0.

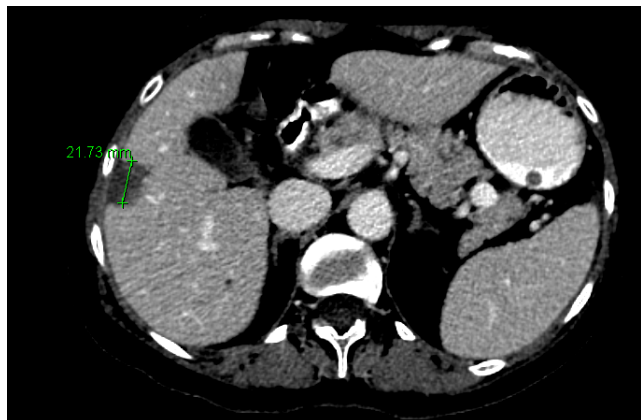


Figure 2: Partial liver response.

Postoperative without alterations, so he continues "adjuvant chemo" with FOLFIRI+Cetuximab without presenting tumor disease after 12 months of the diagnosis of a stage IV colon adenocarcinoma.

Discussion

Liver resectability criteria consist in guaranteeing an R0 resection, preserving 2 contiguous hepatic segments and that the hepatic remnant can be functionally adequate [1].

Regarding peritoneal carcinomatosis, it is true that PCI>20 confers a worse prognosis as well as the presence of visceral (hepatic) metastases. However, recently it has been published that if the patient has<3 liver metastases as well as a PCI<12 or good response after chemotherapy, the surgical decision must be individualized [2].

FOLFOX+Cetuximab (OPUS study) is indicated in potentially resectable native KRAS colon cancer [3]. Imaging technique of choice for hepatic resectability assessment is both MRI and PET-CT (for extrahepatic involvement) [4].

Anti-EGFR can redirect the immune response against tumor cells by interacting with CD3/CD16 expression and exacerbating characteristic side effects such as rash, being a predictor of response [5].

Conclusion

Metastatic colon cancer has achieved a 5 years survival of 50% thanks to the individualization of surgical criteria and availability of targeted treatments. This case includes as novelty the fact of adding HIPEC to metastatic colorectal cancer with a high PCI score and the possible immune relation of an EGFR.

A high PCI index should guide us towards a worse prognosis but the surgical decision must be decided in a Multidisciplinary Tumor Committee, so this can be useful for other patients in this same situation.

Every time we know more molecular factors (KRAS, BRAF, PI3K) as well as clinical signs such as the rash with predictive value of response.

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