

Advanced colorectal cancer in young, HIV positive woman. Case report

Abstract

Colorectal cancer is one of the most common forms of cancers, having a higher incidence ratio in the case of human immunodeficiency virus (HIV) infected population in comparison with the general population. Identifying cases where cancer develops in HIV positive patients is important, as studies demonstrate that, under treatment, HIV positive patients have the same prognostic as HIV negative patients. We present the case of a 24-year-old HIV infected woman diagnosed with rectal adenocarcinoma with liver metastasis, with history of oral contraceptive pills. The neoplasia was in an inoperable stage, therefore, the therapeutical action was chemotherapy. The contraceptive therapy was stopped immediately after diagnosis, while specific therapy for HIV infection was added later in the evolution of the disease, due to late discovery. The health status of the patient had a rapid degradation. Due to the increasing incidence of all types of cancers in the HIV positive population, especially affecting young people, and based on oral contraceptive intake, it is worth studying further if screening for HIV infection in patients diagnosed with different forms of cancers has an effect on their survival rate.

Keywords: HIV, rectal neoplasms, neoplasm metastasis, diagnosis

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Introduction

Among gastrointestinal neoplastic diseases, colorectal cancer is proven to have the highest incidence in Constanta County⁽¹⁾ among gastrointestinal cancers, representing more than 60% of the cases. For patients below 18 years, these represent 17% of the cases recorded in recent years⁽¹⁾.

Other studies, conducted in the same geographical area, or at international level, indicate a significantly higher incidence of all types of neoplastic diseases in the case of patients infected with human immunodeficiency virus (HIV)^(2,3), and for colorectal cancer⁽⁴⁾.

We present a case of advanced, metastatic colorectal cancer in a 24-year-old woman on oral contraceptives. The awareness of the increased risk of cancers for patients infected with HIV is very important, as it represents an emerging health problem.

Case Report

We present the case of a 24-year-old woman, diagnosed with colorectal cancer. The debut of the symptomatology was with discomfort and pain in the right hypochondrium area. This was the reason for the patient to present for consultation at her Family Medicine Office from Constanta. The first investigation conducted was an ultrasonographic scan. The investigation revealed two inhomogenous masses of 4-5 cm each, with increased splenic size 15.5cm/4.8cm, and an undetermined mass located in the pelvic area 4.5cm/5cm.

Blood tests showed severe anemia, with hemoglobin values of 7 g/dl and very high values for carcinoembryonic antigen (1538.6 ng/ml), cancer antigen (CA) 19-9 (72458.17 U/ml) and higher than normal values for the

alpha-fetoprotein test (0.82 ng/mL). CA 125 and CA 15-3 were within normal values.

At the initial control, general status was good, with pale teguments and mucosa, blood pressure 110/60 mmHg, heart rate 80bpm. The abdomen was mobile with the breathing, sensible at palpation in the right hypochondrium. The liver could be identified 2 cm below the costal rebord. Upper gastrointestinal endoscopy was performed with no pathological modifications of the esophagus, stomach and first two parts of the duodenum. The patients was also in treatment starting from 3 years ago with oral contraceptives.

Abdominal contrast computed tomography (CT) has been conducted. This revealed liver with a longitudinal diameter of the right hepatic lobe of 240 mm, with inhomogeneous structure caused by macronodular structures with irregular contour, with hypodense signal and discrete calcifications. Multiple lesions were identified when contrast substances were used, localized at the level of both hepatic lobes. The largest mass was 108mm/106mm, localized in the IVa, VII and VIII segments, which invades the right hepatic canal, with dilatation before the intrahepatic biliary canal. Thrombosis of the posterior ram of the portal vein was also observed (Figures 1 and 2).

Other findings include a normal gallbladder, increased splenic size 105mm/55mm/185mm, portal vein with a caliber of 13mm, pancreas, suprarenal glands and kidneys with anormal aspect. The uterus, ovaries and the bladder present no signs of abnormalities. Multiple adenopathies with maximal diameters between 15mm and 21mm were identified.

Because the findings from the CT didn't match the results of the blood tests conducted before, a colonoscopy

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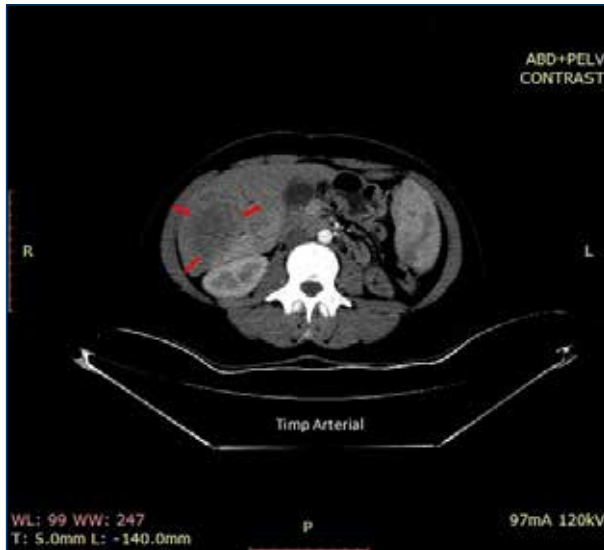


Figure 1. Macronodular mass

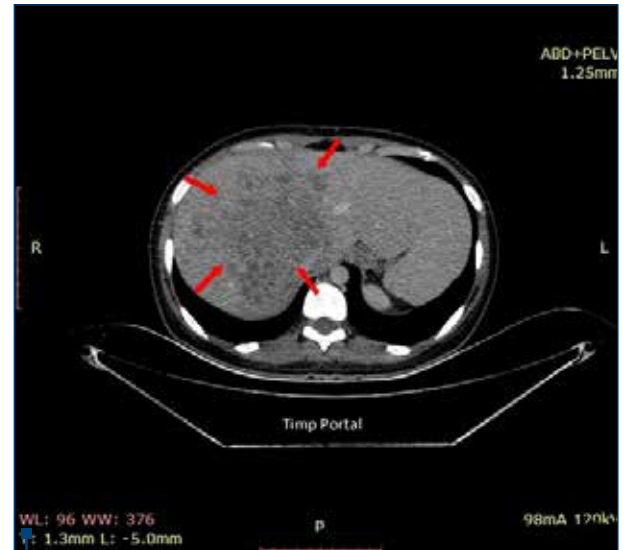


Figure 2. Multiple disseminated masses

was performed. This identified a proliferative, excentric bleeding mass, localized at the level of the rectal canal. Four fragments were taken for anatomopathological examination.

The immediate treatment consisted of three erythrocyte mass transfusions, increasing the hemoglobin at 8.8 g/dl, iron sucrose injections with a favorable clinical evolution.

Discharge diagnoses were: rectal malignant neoplasm of rectum, secondary malignant neoplasm of liver, anemia. At home, and during the third day of hospitalization the patient presents episodes of fever.

The result from the histopathological tests identify characteristics of intestinal adenocarcinoma associated with intraepithelial neoplastic lesions. The grade of the tumor remains undetermined.

After approximately three weeks, the patients asked for a second opinion from an oncology specialized clinic. The patient undergone (positron emission tomography) PET-CT scan with the purpose of staging, magnetic resonance imaging (MRI) of the abdomen, colonoscopy and gene mutation testing were performed for BRAF V600, KRAS, and NRAS.

The PET-CT scan revealed abnormally increased uptake of F-18 fluorodeoxyglucose (FDC) in the lymph node, within the right pericardiac area, with a diameter of 20.1 mm. Abnormal increase of FDC uptake was also present in the bowel segment, in the rectum, with a circular thickening, compatible with malignant tissue. Multiple lesions in both lobes of the liver parenchyma with sizes significantly larger compared to the previous data from the CT (Figure 3).

The whole abdomen MRI concluded that the tumoral mass is 4 cm far from the anal verge, localizes anteriorly in the rectum, with the craniocaudal size of 29 mm, transverse 33 mm, AP 10 mm, without extension towards perirectal fatty tissues, with perirectal lymph node up to 7 mm in diameter.

A second colonoscopy was conducted. A rigid, ulcerative, hemorrhagic mass is observed in one side of the lumen of the rectum, within 3-4 cm of the anal canal (Figure 4).

The conclusions of the investigations were that the tumor is inoperable, therefore, chemotherapy with FOL-FOX (Leucovorin Calcium, Fluorouracil, Oxaliplatin). The first course was well tolerated with the improvement of the symptomatology. Starting with the third course, bevacizumab was added.

After the results for the mutation KRAS, NRAS, BRAF came back negative, the recommendation for cetuximab, starting with the sixth cure was made.

After another three cures of chemotherapy, the patient decides to undergo further investigations and treatment in another clinic. A new CT scan was conducted. This reveals an increased hepatic size, with inhomogeneous structure, important splenomegaly, and numerous adenopathies.

The patient presents fever episodes, with no specific symptomatology, with negative hem cultures, urinalysis, MRSA and ESBL screening being negative. Because the discrepancy between the clinical and imagistic hepatic aspect and the neoplastic disease, a liver biopsy was done and also tests for infectious diseases (HIV, hepatitis B virus and hepatitis C virus). The result of the HIV testing was positive (i.e. rapid test and ELISA confirmation test).

Following the recommendations, the patient was admitted to the Infectious Diseases clinic where HIV infection is confirmed, with stage C3 acquired immunodeficiency syndrome. Antiretroviral therapy was indicated.

The patient died within the next two weeks due to multiple organ insufficiencies, with hepatic insufficiency.

Discussion

The particularities of the case are the rapid evolution of the disease, the young age of the patient and the association of oral contraceptives which at admission it were stop and HIV infection. The early age of the

patient and the aggressive course of the disease was reported before, but this happened before the era of highly active antiretroviral therapies (HAART)⁽⁵⁾. In the case presented, the patient was untreated for HIV, therefore, the similarities with cases presented before HAART it was very likely to appear.

Significant published studies^(6,7) demonstrate the fact that anal and colorectal cancer has a significantly higher incidence in people infected with HIV, and especially in the case of men who have sex with men. At the same time, if HIV positive patients with neoplastic diseases receive proper ARV treatment, their survival rate is similar to the one observed in the general population⁽⁸⁾. Also, the possibility of using both types of substances, for the treatment of HIV - with HAART and neoplasia with different chemotherapies was assessed, and the results show that both treatments retain their efficacy and safety^(9,10).

The purpose of this case presentation is to increase the awareness that non-communicable diseases become a real burden on the HIV positive population, as people living with HIV infection have a higher life expectancy nowadays due to advances on the treatment. Also, because neoplastic diseases have a higher incidence in the HIV positive population⁽¹¹⁾, screening for HIV on patients diagnosed with different neoplastic diseases, especially the ones frequently found, like pulmonary cancers^(12,13), colorectal cancers^(4,14), anal cancer⁽¹⁵⁾. A study conducted in Korea showed a twofold prevalence of HIV infection in the case of patients diagnosed with colorectal cancer⁽¹⁶⁾, results confirmed by other studies⁽¹⁷⁾.

Conclusions

Due to the increasing incidence of cancers in the HIV positive population, especially affecting young people, and based on oral contraceptive intake it is worth studying further if screening for HIV infection in patients diagnosed with different forms of cancers has an effect on their survival rate. ■

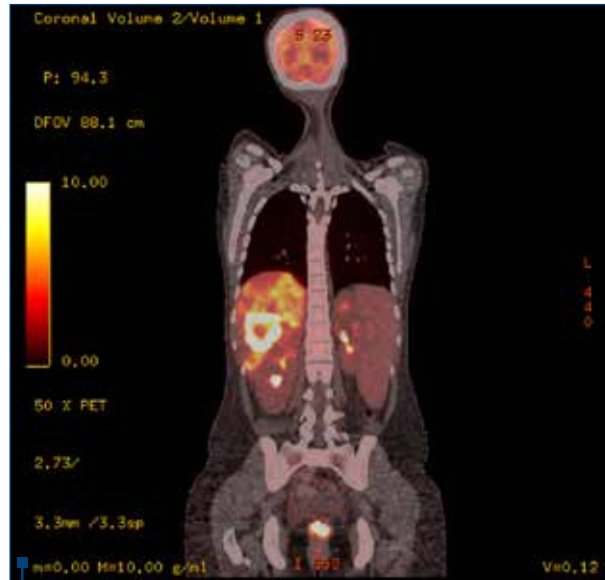


Figure 3. PET-CT Scan with increased uptake liver and rectal areas

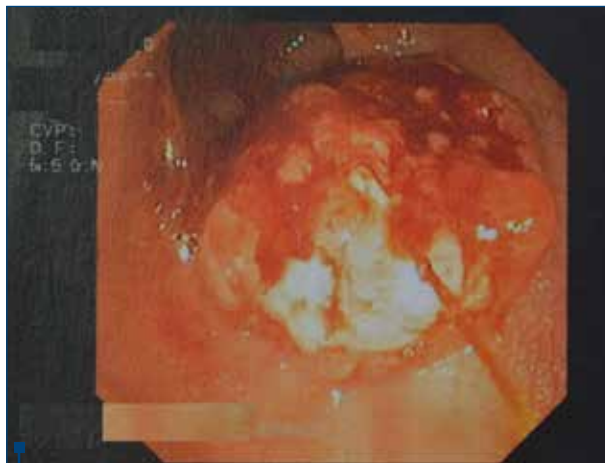


Figure 4. Tumoral mass in the rectum

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