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ELEVENTH ANNUAL MEETING

SYNCHRONOUS DIAGNOSIS OF ACUTE MYELOID LEUKEMIA (AML) AND COLORECTAL ADENOCARCINOMA (CRC)

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INTRODUCTION

Synchronous diagnosis of solid and blood cancers is rare; however, few cases have been reported in the literature.

Herein, we describe the case of a patient diagnosed synchronously with AML and CRC.

CASE REPORT

We present the case of a 68-year-old male who underwent colonoscopy following episodes of abdominal pain, abdominal distension and changes in bowel movements, which revealed a tumor leading to sigmoid colon stenosis, and referred to cancer surgery.

Histopathological examination of the surgical specimen revealed moderately differentiated CRC stage pT4b N0.

As pre-/postoperatively the patient exhibited severe thrombocytopenia despite repeated platelet transfusions, he was transferred to our Hematology Department for further evaluation.

On admission, complete blood count revealed anemia (hemoglobin=10.3 g/dL), thrombocytopenia (40000 platelets/mmc) and monocytosis (7430 leukocytes/mmc, 2440 monocytes/mmc).

CASE REPORT

- Peripheral blood smear examination identified 22% blasts and 12% monocytoid elements (Figure 1). Bone marrow aspirate delineated 78-80% blast cells (Figures 2-3).

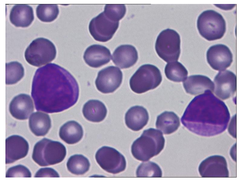


Figure 1. Peripheral blood smear: myeloblasts MGG, 100x.

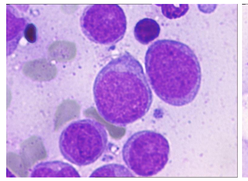


Figure 2. Bone marrow blood smear: myeloblasts, monoblasts MGG, 100x.

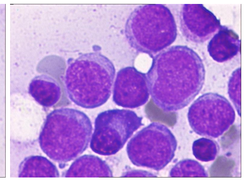


Figure 3. Bone marrow blood smear: blast cells MGG, 100x.

- Immunophenotyping by flow-cytometry pointed out 42% neutrophil-oriented hematopoietic progenitor cells (most likely myeloblasts) with SSC low/medium, CD45+ medium, CD34-, CD117+, HLA-DR+, CD13+, CD33+ heterogeneously, icMPO+ weak, CD38+ heterogeneously, CD15-/+ weak, and 36% monocyte-oriented hematopoietic progenitors cells (monoblasts) with SSC medium/high, CD45+, CD34-, CD117-, HLA-DR+ weak, CD13+, CD33++, icMPO-/+ weak, CD38-, CD64+, CD15+ heterogeneously, CD35-/+, CD300e, CD14- (Figure 4).

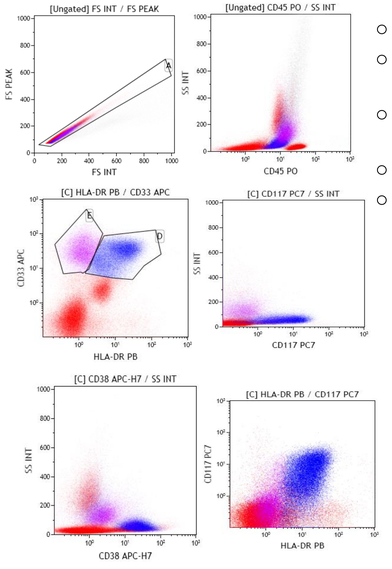


Figure 4. Immunophenotyping performed on bone marrow aspirate blood at diagnosis - flow-cytometry plots

- Karyotype examination was unremarkable.
- del(17p) (TP53) was absent by fluorescence in situ hybridization.
- AML1-ETO, CBFB-MYH11, PML-RARA, MLL-AF9, FLT3-ITD gene fusions were absent.
- Diagnosis of AML was established.
- The patient was deemed unfit for intensive chemotherapy and started on the hypomethylating agent azacytidine in association with the BCL-2 inhibitor venetoclax for AML management, with complete morphological remission achieved following 1 treatment cycle, alternatively with modified DeGramont chemotherapy-regimens in association with bevacizumab for CRC and peritoneal carcinomatosis treatment, with chemotherapy doses and frequency of administration adapted based on hematological toxicity.

CONCLUSIONS

- Diagnosis and management of synchronous malignancies, e.g., AML and CRC with peritoneal carcinomatosis, is challenging and requires multidisciplinary efforts from hemato-oncology tumor boards.
- In our case, due to hematological toxicity from both azacytidine+venetoclax and modified DeGramont + bevacizumab treatment regimens, we adapted dosages and frequency of administration based on the side effects of the therapy, mainly grade IV neutropenia.

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CONTACT INFORMATION

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