Synchronous Presentation of B-Cell Chronic Lymphocytic Leukemia/Small-Cell Lymphoma and Colon Adenocarcinoma Within the Same Mesenteric Lymph Nodes and a Single Liver Metastasis

An 86-year-old man with hypertension and chronic fibrillation presented with worsening abdominal pain and a 2-month history of persistent altered appetite. No other systemic symptoms were reported. At the admission he had mild tenderness and fullness in the right lower quadrant. The remainder of the general examination was unremarkable with no lymphadenopathy. Laboratory findings showed a hemoglobin concentration of 12.4 g/dL, WBC count of 750/μL with 78.8% lymphocytes, and platelet count of 135,000/μL. A peripheral-blood flow cytometry revealed a CD5+, CD19+, CD23+ monoclonal B-cell population. Immunoglobulin levels and renal and liver tests were normal. Hepatitis markers were negative. Serum carcinoembryonic antigen and CA 19-9 levels were 82 ng/mL and 328 ng/mL, respectively. A computed tomography scan of the abdomen and pelvis revealed mesenteric lymphadenopathies associated with a partial obstructive mass in the right colon and a single focal area of increased liver opacity of approximately 14 mm within segment IV consistent with liver metastasis (Fig 1). Computed tomography scan of the thorax showed no evidence of metastases. A complete colonoscopy showed a constricting lesion of the right colon, and multiple biopsies were performed showing moderately differentiated adenocarcinoma. The consideration of high risk of bowel obstruction associated with the low aggressiveness of myeloproliferative disease and the absence of significant comorbidities of our patient prompted us to perform a right hemicolectomy associated with locoregional lymphadenectomy and liver metastasectomy. The pathologic assessment of the resection specimen showed a moderately differentiated adenocarcinoma extending through the muscularis propria. Extramural vascular invasion was present. Microscopic evaluation of the 45 regional lymph nodes isolated from mesenteric fat revealed lymph node architecture predominantly effaced by a diffuse infiltrate of small lymphocytes; in four lymph nodes, an adenocarcinoma metastasis was also present (Fig 2). Liver specimen microscopically revealed subcapsular metastasis of adenocarcinoma with central necrosis; the peripheral hepatic parenchyma showed portal and periportal involvement by infiltration of monomorphic small lymphocytes (Fig 3). By immunohistochemistry, the cells were positive for CD20 (Fig 3, insert), CD5, CD23, and Bcl2 and negative for CD10, CD23,
BcI6, and cyclin D1. Morphologic and immunohistochemical results confirmed the diagnosis of synchronous presentation of B-cell chronic lymphocytic leukemia/small-cell lymphoma (CLL/SCL) and colon adenocarcinoma within the same mesenteric lymph nodes and the single liver metastasis. K-RAS and BRAF mutations were determined on primary tumor DNA after microdissection, and both genes had wild-type mutations. Three weeks after recovery from surgery, the patient underwent bone marrow biopsy for staging lymphoma, which showed nodular and interstitial infiltration of small lymphocytes. These findings indicated that the clinical stage of CLL/SCL was Rai stage I and Binet stage A. According to the International Workshop on Chronic Lymphocytic Leukemia guidelines, we decided to monitor hematologic malignancy until evidence of disease progression. Furthermore, on the basis of the stage of bowel malignancy and the age and number of comorbidities of the patient, we proposed treatment with capecitabine as monotherapy, but the patient refused it. Three months later, [18F]fluorodeoxyglucose positron emission tomography showed a focal uptake (maximum standardized uptake value, 8.7) within liver segment VII (Fig 4). Liver-specific vascularization assessed by a contrast-enhanced ultrasound revealed a late-phase hypovascularized lesion 3.5 cm in diameter within the same segment (Fig 5). A fine-needle aspiration of the liver lesion yielded a small amount of atypical adenomorphous clusters highly suggestive for metastatic colorectal adenocarcinoma and immunoreactive for CK20 (Fig 6), in a necrotic background where only some small lymphocytes were recognizable. As a result of the clinical features of the patient, the absence of symptoms related to the metastatic disease, the suggestion of the lack of a synchronous presence of both malignancies in the liver lesion, and the K-RAS/BRAF status of the colon neoplasm, we proposed a palliative antiblastic treatment with cetuximab (500 mg/m² loading dose and then 250 mg/m² weekly). After the first four cycles, a contrast-enhanced ultrasound showed an increase in the dimensions of the liver metastasis. No skin toxicity was observed. The patient refused any other antineoplastic treatment. In the next month, we missed him at follow-up.

An increased incidence of other malignant neoplasms has been reported in patients with CLL/SCL. Disease- or therapy-related immunosuppression and genetic predisposition have been identified as possible causes for this observed epidemiologic association. Coexisting CLL/SCL and colorectal carcinoma in the same patient is a rare event. In particular, a recent large study showed a lower than expected number of GI and bladder cancers with respect to a higher than expected number of hematologic malignancies, melanomas, and female breast cancers in the same series. An incidental CLL/SCL based on histologic analysis of lymph nodes recovered from a resection specimen for rectal adenocarcinoma has been described. Similarly, liver involvement in the course of
CLL/SCL is reported to be approximately 14%, with portal infiltration of neoplastic cells being the most frequent pathologic pattern. Nevertheless, the contemporary and apposed presence of colon adenocarcinoma and CLL/SCL within mesenteric lymph nodes and liver metastasis has never, to our knowledge, been reported before. Although unable to identify any common etiologic factors in the two malignancies in our patient, we believe that the most likely explanation of their synchronous diagnosis is purely coincidental. Nevertheless, besides its uniqueness, the situation of this patient offers several therapeutic challenges for clinicians with regard to both the management of elderly patients with metastatic colorectal cancer and the influence of one malignancy on the natural history of another.

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AUTHORS’ DISCLOSURES OF POTENTIAL CONFLICTS OF INTEREST
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REFERENCES

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