CASE REPORT

Chronic lymphocytic leukemia and breast cancer as synchronous primary in a male—a rare combination

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KEY WORDS

Chronic lymphocytic leukemia, male breast cancer, synchronous malignancy

1. INTRODUCTION

Second malignancies are known to be associated with chronic lymphocytic leukemia (CLL). The incidence of male breast cancer is 1%. Synchronous presentation of CLL and various malignancies are rare 1–3. We present a rare combination of synchronous primary CLL with breast cancer in a man. This combination presents unique challenges in management.

2. CASE PRESENTATION

A 69-year-old man with no comorbidities and a family history of cancer presented with a right breast lump of 1 month’s duration. On examination, a 3×2-cm right breast lump with ulceration, fixed to the pectoralis major muscle, was noted. A right axillary hard mobile lymph node was also found. Investigations revealed hemoglobin 8.2 g/dL and total leucocytes 63×10⁹/L, with a differential count of neutrophils 13%, lymphocytes 2%, abnormal cells 85%, and platelets 75×10⁹/L. Bone marrow aspiration and biopsy revealed CLL with CD5+ and CD23+. Trucut biopsy from the breast lump revealed an infiltrating ductal carcinoma positive for the estrogen receptor and negative for the progesterone receptor. Staging work-up was normal. The patient had renal dysfunction (creatinine clearance: 30 mL/min) with 13% elevation in uric acid and normal serum calcium and potassium, suggestive of tumour lysis syndrome. The final diagnosis was synchronous primary with carcinoma right breast T4bN1M0 and CLL Rai stage IV.

The advanced nature of the (untreated) CLL, combined with renal dysfunction, made tolerance to an anthracycline and methotrexate regimen doubtful. Hence, this patient received neoadjuvant radiotherapy to the breast, and the CLL was managed with chlorambucil and prednisolone.

On treatment with chlorambucil and steroids, the man developed tumour lysis, which was managed conservatively. After 2 cycles of treatment, his blood counts normalized, and renal parameters and performance status improved. Because of a good local response to radiotherapy, he was planned for neoadjuvant chemotherapy followed by surgery. He received 2 cycles of FAC (doxorubicin, 5-fluorouracil, cyclophosphamide), which he initially tolerated well, with no adverse events. However, on day 15 after the 3rd FAC cycle, he presented with seizures, vomiting, and respiratory distress. The patient succumbed to his illness, with probable cause of death being aspiration pneumonia and septicemia.

3. DISCUSSION AND CONCLUSIONS

The risk of a second malignancy developing in patients with CLL [or with small lymphocytic lymphoma (SLL)] is twice that in the general population. Second cancers that have been observed in patients with CLL include skin cancer (30%), prostate cancer (13%), breast cancer (9%), melanoma (8%), lymphoma (8%), gastrointestinal cancer (9%), lung cancer (6%), and others (17%) 1. Various theories have been advanced to describe this increased risk, including impairment of the immune system, genetic susceptibility, advanced age, and depressed cellular immunity 1,4,5. Patients with CLL also have heightened responses to carcinogens such as tobacco smoke and excessive sunlight. Therapy-related myelodysplastic syndrome or acute myeloid leukemia has been observed in patients treated with the fludarabine and chlorambucil combination. The synchronous presentation of CLL and breast cancer in a man is rare.

The management of dual tumours is challenging. The decisions that have to be made include sequence of the treatment, chemotherapy regimen, and management of complications. These patients are also prone to infections because of immune dysfunction, and they have lower rates of response and survival, which may be a result of factors associated with the other malignant neoplasm, including the effects of therapy.
for that other malignancy. Further investigation of genetic features that predispose patients with CLL/SLL to develop other malignant neoplasms is warranted. Awareness of the possibility of second malignancies in such a situation permits earlier detection.

4. CONFLICT OF INTEREST DISCLOSURES

The authors have no financial conflicts of interest to declare.

5. REFERENCES


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