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SYNCHRONOUS DIAGNOSIS OF ACUTE PROMYELOCYTIC LEUKEMIA (APL) AND RELAPSED BREAST CANCER (RBC)

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INTRODUCTION

- Breast cancer BC survivors may have increased risk of subsequent haematologic cancer [1;2]
- Data on Synchronous diagnosis of acute myeloid leukemia (AML) and breast cancer (BC) are lacking.
- **This case report highlights the concurrent diagnosis of acute promyelocytic leukemia (APL) and relapsed BC (RBC) in a moroccan patient**.

AIM

- **Highlight the complexities and multidisciplinary approach required to manage APL and RBC .**

DISCUSSION

- Leukemia is an **unusual event** in the natural history of BC though its association with BC therapy has been reported. AML occurs particularly in women who received **chemotherapy** and premenopausal patients as they are treated more aggressively than their postmenopausal counterparts. Increase in risk is attributable, especially to anthracycline and alkylating agent dose intensification, and perhaps to concomitant radiotherapy use[1;2].This is consistent with our case .
- Simultaneous occurrence of APL and RBC has never been reported in the literature but chronic myeloid leukemia CML revealing RBC has been published. [3].

CONCLUSION

- The simultaneous management of APL and RBC was challenging. Despite the complexity and cardiotoxicity from prior anthracycline treatment, the patient **achieved complete remission.**

RESULTS

Age	• **45 Y.O**
Background	• Diabetic
Initial BC Diagnosis +Treatment(2019):	• Localized infiltrating ductal carcinoma (pT2N1M0) with hormone receptor expression (ER 95%, PR 60%) and a negative HercepTest,. • Treated with surgery, chemotherapy (Docetaxel and Anthracyclines), radiotherapy, and Hormone therapy (Tamoxifen).
RBC and APL Diagnosis (2023):	• RBC **nodule** observed in **March 2023**. • **Gingival bleeding** and **ecchymoses** led to a diagnosis of APL in **April 2023**. • **CBC** showed **cytopenias** (Hemoglobin level of 7.8 g/dL, a platelet count of 25 × 10^9/L , a leukocytes count of 7600/mm3 and a neutrophils count of 230/mm3) with **blastosis** (92%). • Bone marrow aspiration **BMA and immunophenotyping** confirmed **APL**. Blasts were positive for MPO, CD33, CD13, and CD64. HLADR, CD34 and lymphoid markers were negative. • Medullar Karyotype revealed a **t(15;17)** (q24;q21) translocation.
APL Treatment and Remission:	• The cumulative dose of anthracyclines was 180 mg/m2. • Treated with **PETHEMA** protocols for **intermediate risk**. • **Complete medullary remission** achieved by **May 2023,** confirmed by BMA and cytogenetic studies. • First **consolidation cure** was performed on 05/30/2023 • The Multidisciplinary team **MDT's decision** was to proceed directly to maintenance therapy and refer the patient back to the oncology department. • Minimal Residual Disease **(MRD)** assessment **in March 2024** confirmed sustained **molecular remission** of APL.
BC Management (2023-2024):	• RBC confirmed via biopsy. • The staging did not reveal any metastases. • MDT decided on mastectomy (November 2023) and continued tamoxifen as adjuvant therapy. • Patient is scheduled for surgical castration

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