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A new case of t(16;21)(q24;q22) in a secondary AML-M2 following breast cancer therapy

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**Clinics**

Age and sex : 61 yrs old female patient
Previous history : no preleukemia; Breast cancer diagnosed in 2002, treated with radical mastectomy, chemotherapy with cyclophosphamide, epirubicin, 5-fluorouracil, radiotherapy.; -no inborn condition of note;
Organomegaly : no hepatomegaly; no splenomegaly; no enlarged lymph nodes; no central nervous system involvement

**Blood**

WBC : 2.4 x 10^9/l; Hb : 10.7 g/dl; platelets : 48 x 10^9/l; blasts : 2 %%
Bone marrow : Neutrophils 0.05 ; Band cells 0.05 ; Metamyelocytes 0.13 ; Myelocytes 0.02 ; Promyelocytes 0.02 ; Blasts 0.51 ; Late normoblasts 0.13 ; Plasma cells 0.01 ; Lymphocytes 0.05 ; Monocytes 0.01 ; Eosinophils 0.02%

**Survival**

Date of diagnosis: April 2005
Treatment :
  Related bone marrow transplantation planned for September 2005
Complete remission : None
Status : A
Survival : 3 months +

**Karyotype**

Sample : Bone marrow; culture time : 24 hours; banding : GTG
Results : 47,XX,+8,t(16;21)(q24;q22)[13]/46,XX[3]
Comments

The t(16;21)(q24;q22) is mainly found in t-MDS/t-AML (14/16 cases (1-10)), following breast cancer therapy (five cases (7,8,10)), lymphoma (four cases), Hodgkin's disease, lung and oviductal cancers and AML-M3 (one case each). Trisomy 8, the secondary change found in the current case, is also reported in most if not all patients with previous breast cancer (7,8,10).

To note, three out of five patients had lymphoid positive antigenes (5,7, current case). All of the nine patients whose treatments were reported (3-9), plus the current case, were treated with a combination of alkylating agents and topoisomerase II inhibitors, +/- radiotherapy.

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