Chronic Myeloid Leukaemia Initiating as Acute Lymphoid Leukaemia

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To the Editor

In the last years some cases of chronic myeloid leukaemia (CML) initiating as acute lymphoid leukaemia (ALL) have been described [1, 3–5]. A similar case was observed by us.

C. P., a 37-year-old woman developed phlebitis shortly after her third delivery (12-IV-1973). This resolved quickly. She then developed bilateral mastitis, followed by pallor and weakness. Blood examination (9-V) showed: RBC 2.5 X 10¹²/1, WBC 43 X 10⁹/1, platelets 80 X 10⁸/1. On admission the patient showed generalized lymphadenopathy, marked splenomegaly, bilateral enlargement of the breasts, which contained hard, painful nodules, skin dimpling and blushing. The leucocyte count rose to 72 × 10⁹/1, with 40% lymphoblast-like cells (fig. 1A), but there were also 2% myelocytes, 3% metamyelocytes and 2% basophils. The bone marrow was hypercellular with total replacement by PAS-positive lymphoblasts (fig. 1B). After two courses of COAP she entered complete remission: RBC 3.8 X 10¹²/1, WBC 4.5 X 10⁹/1 with 72% neutrophils, platelets 240 X 10⁹/1; bone marrow hypocellular with 3% blasts. The breast infiltration, lymphadenopathy and splenomegaly were resolved.

In November, despite further treatment with COAP and POMP, she showed a CML-like picture: WBC 26 X 10⁹/1 with 6% blasts, 18% granulocyte precursors; marrow hypercellular with 10% myeloblasts and 49% granulocyte precursors (fig. 1C, D). She had a good response to 6-MP: WBC 11 X 10⁹/1 with 1% blasts, 6% granulocyte precursors, platelets 950 X 10⁹/1; hypercellular bone marrow with myeloblasts 1% and granulocyte precursors 30%.

In February she was readmitted because of meningeal involvement and splenomegaly. She was in haematological relapse with WBC 95 X 10⁹/1 with 6% blasts and 74% granulocyte precursors. The lumbar puncture showed increased pressure and CSF sediment composed of many lymphoblast-like cells (fig. 1E). The meningeal involvement resolved after intrathecal methotrexate and cranial irradiation. February 11 she was started on busulfan, but a few days later the breast infiltration recurred.

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Fig. 1. Blood (A) and bone marrow (B) at presentation; CSF sediment (C); blood (D) and bone marrow (E) in chronic myeloid phase; bone marrow (F) in terminal crisis.

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The blast count increased and the patient died on 20-ΓV-1974 of cerebral haemorrhage.
In summary, this is a case of CML, Ph1 positive, initiating with a clinical and haematological picture typical of an ALL with PAS-positive lymphoblasts and tumour-like infiltration of the breasts, very sensitive to ‘ALL oriented’ chemotherapy. Concerning the combined occurrence of breast infiltration and CNS involvement, we have found it mentioned only in case No. 7 of Peterson et al. [4], whilst in case No. 3 and 7 of Beard et al. [1] and No. 5 of Peterson et al. [4] CNS involvement alone was present. The principal interest of such cases has been already outlined [2].

References