
Central nervous system relapse occurs in about 5% of cases of acute promyelocytic leukaemia

In this report, we present images from a patient with acute promyelocytic leukemia who experienced several central nervous system relapses.

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Atypical promyelocytes with Auer rods and PML-RAR α transcripts were detected in the cerebrospinal fluid. These pictures were obtained by centrifuging cerebrospinal fluid at the last relapse in November 2006, and are significant because they show promyelocytes presenting bizarre *heart-shaped* nuclei (Figure 1) and bundles of eosinophilic Auer rods in the cytoplasm (Figure 2 and 3).

We emphasise that although this patient, a 33-years old

female affected by acute promyelocytic leukemia since July 2003, entered haematological and molecular complete remission using the AIDA protocol, she experienced several relapses involving both bone marrow and cerebrospinal fluid.

At the moment she is in complete remission (haematological and molecular) after treatment with arsenic trioxide but with the persistence of few atypical promyelocytes in the cerebrospinal fluid.

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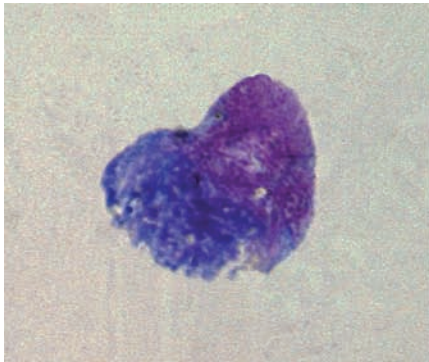


Figure 1

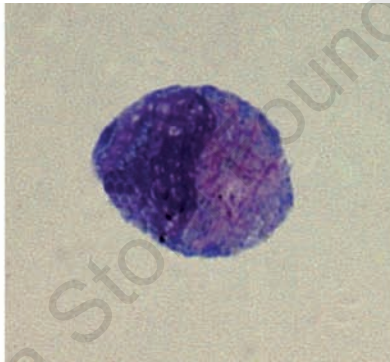


Figure 2

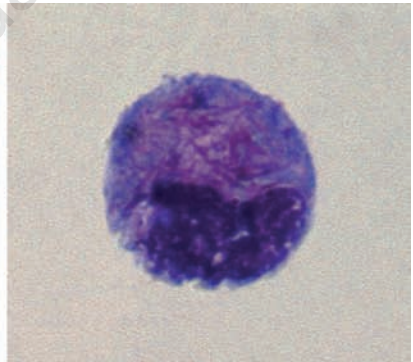


Figure 3