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E-ROSETTE FORMATION IN ACUTE NONLYMPHOCYTIC LEUKEMIA

To the Editor:

We noted with interest the article by Mirro et al.1 Four of 23 cases of acute myeloblastic leukemia (AML) diagnosed by morphological and cytochemical criteria reacted with OKT11 (Ortho Diagnostics, Raritan, NJ) and T11 (Coulter Electronics, Hialeah, Fla), the sheep erythrocyte rosette-associated antigen of T cells. Dual staining of blast cells from two patients demonstrated a small number of cells that simultaneously expressed T11 and myeloperoxidase; however, sheep cell rosettes (ERs) at 4 °C and 37 °C were infrequent and did not correlate with the T11 monoclonal reactivity.

We have recently noted a 79-year-old patient with AML by standard criteria showing cells consistent with French-American-British classification (FAB) M5 by Romanowsky staining, containing Auer rods (Fig 1A), and being positive for Sudan Black B (SBB) and myeloperoxidase (MPO). Immunologic phenotyping2 showed TdT positivity and T11 reactivity in the majority of blast cells and reactivity for myeloid markers (My4, My7, Leu M1). Further cytochemical staining showed focal nonspecific acetate esterase (NSE) and focal acid phosphatase (AP) positivity in the majority of blast cells (Table 1).

Unlike the patients of Mirro et al, our case showed numerous sheep cell rosettes (at 4 °C). Some of the blast cells in the sheep cell rosettes were peroxidase positive (Fig 1B). To date, we have noted the T11 antigen in only one of 80 cases of AML, while My7 has not been found in eight cases of T ALL.

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Table 1. Immunologic and Cytochemical Markers

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*T subsets include T4, T8, T3, T6, and T9.

†4 °C, 2-aminoethylisothio-uronium bromide hydrobromide-treated sheep erythrocytes.
E-rosette formation in acute nonlymphocytic leukemia [letter]

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