SCIENTIFIC LETTER

Ecthyma gangrenosum as an initial manifestation of acute lymphoblastic leukemia

Ectimá gangrenoso como manifestación inicial de leucemia linfoblástica aguda

Dear Editor,

Ecthyma gangrenosum (EG) is a cutaneous lesion frequently associated with infection by *Pseudomonas aeruginosa*. It usually affects immunocompromised patients, although its presence is rate at the time of diagnosis of acute lymphoblastic leukaemia (ALL). We present 2 cases of EG as the initial manifestation of ALL.

**Case 1.** Boy aged 19 months, with no history of interest, brought to the emergency department with high fever of 3 days’ duration and a skin lesion measuring 1 x 2 cm with an ulcerated centre surrounded by a necrotic scab in the external surface of the right leg. The salient blood test results were pancytopenia (haemoglobin, 5.2 g/dL; platelet count, 60 000/mm³; neutrophil count, 450 cells/mm³) and a lymphoblast percentage of 78%, suggestive of ALL, with elevation of acute phase reactants (C-reactive protein [CRP], 303 mg/L; procalcitonin [PCT], 33 ng/mL). Broad-spectrum antibiotherapy was initiated with intravenous piperacillin-tazobactam, amikacin and vancomycin following collection of a wound swab and blood sample for culture. The bone marrow test confirmed the diagnosis of acute leukaemia, more specifically, common B-cell ALL with hyperdiploidy. The patient underwent a cranial computed tomography scan and funduscopic examination on an emergency basis, the results of which were normal. The cerebrospinal fluid analysed at 3 days from onset due to coagulopathy and instability associated with sepsis was traumatic but without blasts (CNS 2t). The abdominal ultrasound revealed hepatosplenomegaly; and the results of all other tests were normal.

Remission induction therapy was initiated according to the LAL/SEHOP-PETHEMA-2013 protocol for standard risk patients. Multisensitive *P. aeruginosa* was isolated from the wound sample, while the blood culture was negative. The patient required wound care every 48 h, administration of G-CSF, enzymatic debridement and negative pressure wound therapy (single-use PICO system), which achieved a favourable response. The assessment of ALL on days 8 and 15 showed improvement. The patient achieved morphological remission on day 33 with minimal residual disease (<0.01%) (Figs. 1 and 2).

The presence of EG in seemingly immunocompetent patients requires an exhaustive investigation to rule out undiagnosed and potentially serious medical conditions.

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such as the onset of acute leukaemia.\(^1\) Cases of EG in patients with ALL during different stages of treatment have been previously described, but none of onset with EG. The characteristic lesion is a purpuric and erythematous macula that rapidly progresses to a haemorrhagic vesicle and eventually to a necrotic ulcer.\(^2\) Early treatment with initiation of empiric antibiotherapy is important, as invasive forms of EG are associated with a high mortality.\(^1\) Surgical intervention or the use of negative pressure wound therapy is often necessary.\(^4\)

Furthermore, since neutropenia is one of the main factors involved in its development, the use of G-CSF or granulocyte transfusions may be contemplated with the aim of reducing the duration of neutropenia and expedite wound healing.\(^3\)

References


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