Unithiol

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Stevens-Johnson syndrome: case report

A 26-year-old man developed Stevens-Johnson syndrome (SJS) after chelation with unithiol [DMPS; Dimaval] after exposure to lead-containing gas at his workplace.

The man underwent chelation therapy with decreasing doses of unithiol over 5 days (900 mg/day on day 1, 300 mg/day on day 5) [*route not stated*]. Three days later, he developed a pruritic exanthema, spreading in a centripetal pattern from his upper arms. However, his serum lead level had remained unchanged 10 days after exposure, and a second unithiol cycle was administered . Despite additional local therapy with beclometasone cream, his skin condition markedly worsened and he started vomiting.

Unithiol was discontinued 24 hours after initiation of the second cycle; he had received unithiol 300mg on day 1 and 600mg on day 2. On presentation the following day, he exhibited predominantly acral exanthema with atypical cockades and multiple blisters, plantar pompholyx-like blisters and erosions, as well as erosions of his oral and genital mucosa. The skin condition involved < 10% of his total body surface area, and his general condition was markedly reduced. Histological examination identified subepidermal blisters, hydropic basal membrane degeneration and epidermal keratinocyte apoptosis. A perivascular, predominantly lymphocytic, CD8+ and CD4+ inflammatory infiltrate was noted in the oedematous corium. Skin tests with unithiol evoked 1+ reactions at 72 hours (erythematous plaque), and a biopsy of the plaque showed lymphocytic infiltration of the corium. Further investigations of the erosions identified colonisation with *Staphylococcus aureus* and coagulase-negative staphylococci. Laboratory investigations revealed the following: LDH 349 U/L, CRP 8.92 mg/dL, WBC count 10 900/µL, 86% neutrophils and lead concentration 549 nmol/L; his ALT level subsequently increased to 77.3 U/L. Treatment comprised oral prednisolone and clobetasol cream. Larger blisters were opened and antiseptically treated. Once blistering ceased, prednisolone was tapered off over 4 weeks. Skin lesions on his trunk, arms and legs resolved quickly, while healing of hand and foot lesions occurred more slowly.

Author comment: *Given the concurrent development of atypical cockades, blisters, mucosal lesions and general symptoms, we favoured a diagnosis of Steven-Johnson syndrome.*

Storim J, et al. Dithiols as chelators. A cause of bullous skin reactions. Hautarzt 62: 215-8, No. 3, Mar 2011 [German] - Germany 803060453