Case Report: Leukocytoclastic vasculitis in a MS patient following alemtuzumab treatment

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Abstract

Alemtuzumab, a recombinant DNA-derived monoclonal antibody which acts against cell surface glycoprotein CD52, has been in use since 2001 for chronic lymphocytic leukemia (CLL) and was approved for use in multiple sclerosis (MS) in 2014. It is occasionally associated with infusion reactions, which are usually transient, and, uncommonly with thrombocytopenia and thrombocytopenic purpura. This report describes a case of leukocytoclastic vasculitis (LCV) which occurred two weeks after a five day course of alemtuzumab

Objective

To improve diagnosis and treatment of cutaneous vasculitis following alemtuzumab.

Methods

Clinical history, physical evaluation, photographs and skin biopsy

Results

The patient is a 52-year-old Caucasian man with relapsing MS. After pre-treatment with diphenhydramine, acetaminophen and methylprednisolone (1000mg for the first 3 days, and 500mg for the final 2 days), he received five consecutive days of 12mg of alemtuzumab without side effects. Ten days after the final infusion, he reported generalized pruritis; examination the day revealed an erythematous purpura-like rash, primarily on the forearms and upper legs. Platelets were normal, raising clinical suspicion of LCV, which was confirmed by skin biopsy. The patient was treated with prednisone 60 mg daily for one week and the rash cleared completely; prednisone was tapered and discontinued during the following week. The patient had no associated symptoms. He has had no recurrence and his general and neurologic exams remain stable

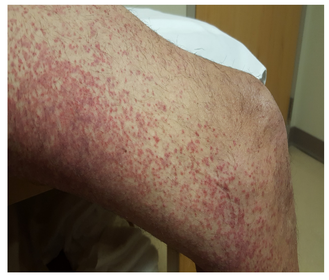

Figure 1

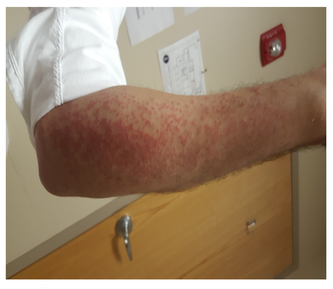

Figure 2

Conclusions

Cutaneous leukocytoclastic vasculitis is usually a self-limited, treatable problem which may be idiopathic or associated with medication or multiple disease states. Although alemtuzumab is an effective treatment for MS in many patients, it may be associated with potentially life-threatning thrombocytopenia and patients are closely followed. The preset case adds another diagnosis, that of the more benign leukocytoclastic vasculitis, to the differential for post-treatment

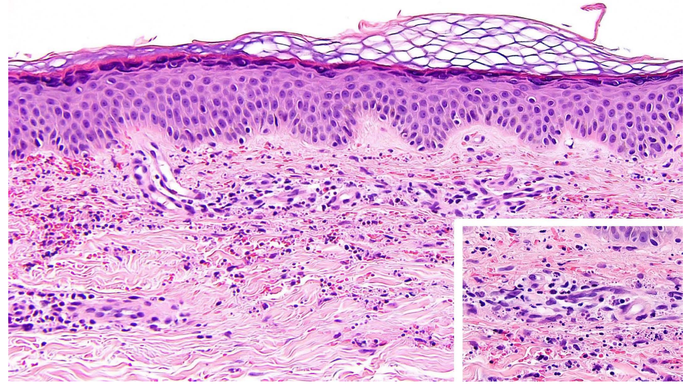

Figure 3 - "Superficial and mid dermal mixed inflammatory infiltrate with erythrocyte extravasation (40X). Note the endothelial swelling and neutrophilic karyorrhectic debris within the walls of small cutaneous vessels (inset, 400X)"

References

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3. Kappos L et al. *Lancet.* 2011;378:1779-87

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