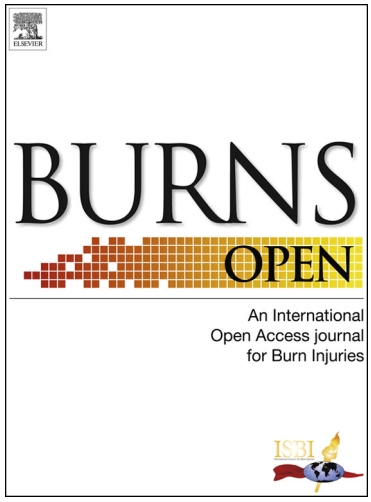

Case Report

The application of comet assay in monitoring of the immunosuppression level in a patient with toxic epidermal necrolysis: A case report

B. Lipový, M. Matejovičová, H. Řihová, M. Štikarovská, L. Novotná, M. Hlavá čová, H. Paulová, I. Suchánek, P. Brychta

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The application of comet assay in monitoring of the immunosuppression level in a patient with toxic epidermal necrolysis: a case report

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Abstract

Toxic epidermal necrolysis (TEN) represents the most serious affection within the SCARs group (Severe Cutaneous Adverse Reactions). It is an autoimmune disease manifested by extensive epidermal and mucosal exfoliation. The basic approach in the therapy of patients suffering from toxic epidermal necrolysis is the administration of immunosuppressive medications. Comet assay is a fast, sensitive and relatively easy method used to detect DNA damage levels. We present a case report of a woman with toxic epidermal necrolysis treated with cyclosporine A. During the therapy, comet assay was used to detect the level of DNA damage of circulating lymphocytes and it helped us to reveal qualitative abnormalities in these cells.

Key words: toxic epidermal necrolysis; immunosuppression; comet assay

Introduction

Toxic epidermal necrolysis (TEN) belongs to a larger group of SCARs - Severe Cutaneous Adverse Reactions. TEN was described for the first time in 1956 by Scottish dermatologist Alan Lyell**[1]**. A basic clinical manifestation is skin exfoliation of various extension (30% of total body surface area minimally) that is usually accompanied by mucosal infliction. It is a reaction of the immune system to the presence of an unknown element (usually medicament)**[2].**

Although the complete pathophysiological background of the autoimmune process has not been identified yet, the use of immunosuppressive drugs is the basis for therapeutic approach