AUTOIMMUNE BULLOUS DISEASES

GLIPTIN-ASSOCIATED BULLOUS PEMPHIGOID AND THE EXPRESSION OF DIPEPTIDYL PEPTIDASE-4/CD26 IN BULLOUS PEMPHIGOID

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Background: Bullous pemphigoid (BP) is the most frequently occurring autoimmune blistering skin disease. Recently several epidemiological studies have demonstrated that dipeptidyl peptidase-4 inhibitors (DPP-4i or gliptins), widely used in the treatment of diabetes, increase the risk of BP. BP associated with gliptin treatment has often classical BP characteristics, but may also display atypical in phenotype and immunological findings.

Objective: The aim of our study was to clarify whether BP cases previously treated with gliptins have special features. We also explored the expression of DPP-4/CD26, BP180 and its binding partner laminin-γ2 in the skin of BP patients, and the effect of gliptins on their expression in cultured keratinocytes.

Methods: We analyzed the clinical, histopathological and immunological features of 27 BP patients 10 of whom had preceding gliptin medication. The expression of DPP-4/CD-26, BP180 and laminin-γ2 in skin samples was investigated by immunohistochemistry and their expression in DPP-4i-treated keratinocytes by immunoblotting.

Results: Compared to those who had not, subjects who had previously received gliptins had lower BP180-NC16A ELISA values, fewer neurological co-morbidities and shorter time to remission, but differences were not statistically significant. The HLA-DQB1*03:01 allele was more common among BP patients in general than in the control population, but was not more common in those with gliptin history. The skin expression of DPP-4/CD-26 was increased of BP patients, but not affected by prior gliptin treatment. The treatment of keratinocytes with gliptins elevated the amount of BP180 and laminin-γ2, but the increases were not statistically significant.

Conclusion: DPP-4i medication is common among BP patients and prior gliptin treatment may be associated with some specific features. The expression of DPP-4/CD-26 is elevated in BP skin, regardless of previous gliptin intake, underlining the role of DPP-4/CD-26 in inflammatory processes in general.