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Psoriasisform dermatitis following anti-CD20 therapies: Immunologic lessons and management dilemmas

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Callanan et al. reported a case of severe psoriasiform dermatitis (PD) following ocrelizumab treatment for active relapsing multiple sclerosis (MS). Although they were not the first authors to notify this, they here report the most systematic analysis of post-ocrelizumab psoriasis and thus correctly conclude that psoriasis or PD is a significant and specific risk of ocrelizumab treatment and that risk-management plans should be adapted.

Regarding pathophysiology, substantial differences appear to exist between PD and MS. Whereas PD shows a strong involvement of interleukin (IL)-12-family cytokines or tumour necrosis factor (TNF)-α and thus

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responds to blockade thereof. MS only slightly alleviates following IL-23 blockade and even deteriorates following TNF-α-inhibition.[1] Notably, regulatory B cells were shown to suppress IL-23-signalling in PD[2] and by such mechanisms, ocrelizumab eventually induces disadvantageous changes in the immune network beyond the B-cell compartment itself and favours development of secondary autoimmunity in susceptible individuals. A key question is whether such imbalances are persistent following ocrelizumab treatment, and whether these secondary autoimmune phenomena persist or even deteriorate (despite ocrelizumab cessation).

Alemtuzumab-induced autoimmunity usually persisted as T-cell reconstitution happens only incompletely and is driven by homeostatic proliferation even corroborating established autoimmunity.[3] The B-cell compartment, however, reconstitutes within months (at least quantitatively) and previous literature suggested stability of B-cell compartment architecture despite anti-CD20 treatment.[4] Thus, the course of secondary autoimmunity remains unclear. Long-term follow-up of patients with PD secondary to ocrelizumab treatment could hence provide evidence on the long-term effects of B-cell depletion itself.

Currently, however, ocrelizumab cessation appears warranted in patients with PD. Regarding the subsequent immunomodulatory treatment, clinicians face the challenge of choosing a suitable substance and are likely required to consider combination treatment. In absence of useful risk predictors, clinicians should carefully screen ocrelizumab patients for skin reactions.

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Data sharing not applicable to this article as no data sets were generated or analysed during this study.

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