Short Communication

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Tapering of TNF-α Inhibitors is Feasible for Rheumatoid Arthritis Patients who have Achieved Remission

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Considering the dose-dependent adverse effects and economic burdens of tumor necrosis factor (TNF)-α inhibitors [1,2], the feasibility of their tapering, either dose reduction or injection spacing, after achievement of remission for rheumatoid arthritis (RA) patients should be evaluated. Smolen et al. demonstrated that moderately active RA patients could more effectively maintain low disease activity under reduced dosage of etanercept than total withdrawal [3]. Emery et al. also revealed that tapering of TNF-α inhibitors for early RA patients who were in remission resulted in better disease control than withdrawal of biologics [4]. Although the relapses of disease activity is more common in RA patients who received tapering of TNF-α inhibitors compared with those under continuously full dosage of biologics [5-7], there was no significant difference in radiographic or functional outcome [6,7]. Besides, the meta-analysis [8] and 2015 recommendations [9] also suggested that continuing biologic therapy at a reduced dose for RA patients who have achieved remission allows for the fair to good outcomes to be sustained. However, there has been no well-established down-titration strategy for biologics treatment in RA patients.

Clinically it is also important to search for predictive markers, which could identify patients who may maintain good outcome after down-titration of TNF-α inhibitors. Haschka et al., in the Reduction of Therapy in patients with Rheumatoid arthritis in ongoing remission (RETRO) study, revealed the presence of anticitrullinated protein antibodies (ACPA) was associated with disease relapses when biologics were tapered [5]. Using the same cohort, multi-biomarker disease activity (MBDA) score could improve the prediction of disease relapses in RA patients undergoing tapering of disease-modifying anti-rheumatic drugs after achieving remission [10]. In spite of the conflicting results regarding the value of serum drug trough levels for predicting successful dose reduction [11,12], drug level monitoring may help clinicians optimize anti-TNF-α therapy and prevent overtreatment for RA patients in clinical practice [11,13,14]. Recently, Naredo et al. demonstrated that the presence of Doppler ultrasound-detected synovitis may predict for failure of biologic tapering for RA patients in sustained clinical remission [15]. In addition, a disease activity-guided dose-reducing strategy of TNF-α inhibitors for treating RA patients is non-inferior to usual care in terms of major flares, and the implementation of such strategy would improve the cost-effectiveness of biologic therapy [6].

In conclusion, based on the findings of previous studies, the meta-analysis, and the current treatment guidelines, tapering of TNF-α inhibitors is feasible for RA patients in sustained remission [3-9]. Further studies in search for reliable markers to predict for successful tapering of TNF-α inhibitors in such RA patients are warranted.

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