Analysis of potential determinants for a treat-to-target strategy in psoriatic arthritis patients from a real-world setting

Sirs,

We read with interest the 2017 update of recommendations for treat-to-target (T2T) in spondyloarthritis (1), in which a strategic approach with regular assessment of disease activity, using unidimensional or multidimensional instruments, and therapeutic adaptations to achieve a specific target was proposed. However, psoriatic arthritis (PsA) optimal treatment approach and follow-up strategies, aimed to improve clinical, functional and structural outcomes, as well as specific instruments to assess disease activity, are still debated, due to the complexity of disease (2). Furthermore, although in PsA a T2T strategy has been recognised as being associated with a better outcome (3), there are barriers for the application of a T2T strategy in clinical practice, because the T2T approach could be time consuming and stressful for the high number of needed visits and, therefore, difficult to be widely implemented (4). Implementation with technology (by using algorithm to calculate outcomes such as minimal disease activity criteria) can help to make this approach feasible in clinical practice as suggested by Coates (5). However, no many data are coming from real-world clinical practice and, hopefully, having some results on T2T strategy could be important for the patient's management. In this letter we would like to share the results of our experience, showing data on whether a T2T strategy was adopted in daily clinical practice and which determinants were associated with this management option.

Our electronic database encompassed all demographic, clinical and laboratory parameters normally assessed in PsA patients. A total of 138 patients were identified from 1st April 2015 to 31st March 2018. Fifty (36.3%) patients had a mean interval between visits >6 months while 88 (63.7%) patients were visited with a tight control and T2T strategy, with a mean interval between visits ≤6 months. Of note, at the last available visit during the follow-up, low disease activity (assessed by the Disease Activity Index for Psoriatic Arthritis-DAPSA) (6) was obtained in 52 (60%) of the 88 patients that followed a T2T strategy and in 20 (40%) of patients (p=0.03). DAPSA remission was present in 18 (20.5%) and 6 (12%) of patients respectively. Data showed that patients with higher disease activity at baseline, severe skin involvement and comorbidities were more prone to be followed with a T2T strategy (Table I). Our results, coming from a real-world practice, showed that most of the patients were followed with a T2T strategy, demonstrating that this approach might be feasible. The results also demonstrated that high disease activity at the baseline visit, together with the presence of severe skin involvement and comorbidities were associated with the adoption of T2T. These determinants are the factors that potentially needed a tight control approach which is in keeping with the T2T strategy. Moreover, the outcome at the last available visit was even better, suggesting the effectiveness of this approach. Our result could also demonstrate that T2T approach might be considered "flexible" and targeted to single patient. In other words, in clinical practice a T2T strategy might be implemented in patients with some characteristics at baseline and should be adapted in the single patient in the light of the concept of personalised medicine. In fact, there is a possibility to identify a target to be treated, namely joint or skin depending of the predominant manifestation that could be important in the treatment strategy (7). This aspect could also be in keeping with the necessity to adopt some instrument to assess disease activity such as DAPSA for predominant joint involvement or minimal disease activity for a multidimensional disease.

Finally, the results show a possible stratification of severity at baseline of a multifaceted disease preventing, potentially, a worse outcome.

Table I. Association of main demographic and clinical variables with a tight control strategy (mean interval between visits ≤6 months) (logistic regression).

Variable	Tight control strategy		
	OR	95% CI	*p*-value
Age (years)	1.02	(0.99-1.057)	0.17
Sex (male *vs*. female)	2.06	(0.86-4.93)	0.10
Presence of obesity (BMI ≥30)	1.52	(0.65-3.55)	0.32
Disease duration (months)	0.93	(0.77-1.13)	0.51
Clinical subset	-	-	-
Polyarticular *vs*. other	1.003	(0.42-1.44)	0.99
Mono-oligoarticular *vs*. other	1.12	(0.51-1.65)	0.81
Prevalent axial *vs*. other	2.41	(0.62-9.30)	0.30
Prevalent enthesitic *vs*. other	0.67	(0.18-2.42)	0.70
Mutilans	-	-	-
Presence of comorbidities (any)	5.333	1.41-20.11	<0.01
Disease activity at baseline (DAPSA), high *vs*. moderate or low	55.8	(3.27-951)	<0.0001
Disease activity at baseline (DAPSA), moderate-high *vs*. low	4.31	(1.84-10.1)	<0.001
CRP levels, high *vs*. normal (<3 mg/l)	1.9	(0.58-6-15)	0.37
LEI 0 *vs*. ≥1	1.03	(0.52-1.72)	0.40
BSA ≥10% *vs*. <10%	3.97	(0.96-15.19)	0.049
BSA ≥3% *vs*. <3%	4.231	(1.489-12.02)	0.005

OR: odds ratio; CI: confidence interval; BMI: body mass index; DAPSA: disease activity score for psoriatic arthritis; LEI: Leeds enthesitis index; BSA: body surface area.

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