

## Switching from Intravenous to Subcutaneous Formulation of Abatacept: Different Results in a Series of 21 Patients

To the Editor:

We read with interest the article by Reggia, *et al*<sup>1</sup>, a monocentric study analyzing the efficacy and safety of switching from intravenous (IV) to subcutaneous (SC) formulation of abatacept (ABA) in patients with rheumatoid arthritis. The authors report a relatively high risk of disease relapse (27%) occurring in a mean of 11 weeks after switching to SC administration. The study did not find any significant predictive factor for a switch failure. The concern that patients with a higher body mass index could receive lower cumulative doses compared to weight-tiered monthly infusions, leading to a significant influence on treatment efficacy, was not confirmed by this study, or by previous dose-finding trials and non-inferiority randomized studies<sup>2,3,4</sup>.

We describe our experience based on a case series of 21 consecutive patients switching from ABA IV to SC administration at our center. The switch was motivated by difficulties in obtaining peripheral venous access, or to optimize compliance. General characteristics of the population are presented in Table 1. Mean duration of previous ABA IV therapy was 14.4 ± 8.4 months. Patients were followed up to 6 months thereafter. ABA represented the first-line biologic disease-modifying antirheumatic drug (bDMARD) in 42.9% of cases. ABA was prescribed as a second (42.8%) or further biologic treatment-line (14.3%), mainly following anti-tumor necrosis factor agents or tocilizumab in a single case. All patients were treated with a concomitant conventional synthetic DMARD (csDMARD), represented in 76.2% of cases by methotrexate. In our cohort, the levels of disease activity achieved during IV treatment were maintained or improved throughout the period of observation in the majority of patients (80.9%). Mean baseline levels of 28-joint Disease Activity Score (DAS28; 3.32 ± 1.22) significantly improved by the end of the followup (3.00 ± 0.89; *p* = 0.02). Two patients (9.5%) returned to IV administration because of subjective preference. Two patients experienced a worsening in disease activity, reaching DAS28

Table 1. General characteristics of the study population. Data are mean ± SD unless otherwise indicated.

Variable	Data
F:M	18:3
Mean age, yrs	60.9 ± 12.3
Mean disease duration, yrs	9.1 ± 6.8
Previous prescriptions of bDMARD, %	57.14
ABA IV as first line bDMARD, % of cases	42.86
Previous ABA IV therapy duration, mos	14.4 ± 8.4
Concomitant csDMARD, %	100
DAS28 baseline	3.32 ± 1.22
DAS28 6 mos	3.00 ± 0.89

bDMARD: biologic disease-modifying antirheumatic drug; ABA: abatacept; IV: intravenous; csDMARD: conventional synthetic DMARD; DAS28: 28-joint Disease Activity Score.

moderate disease activity ranges at a single timepoint during followup. A significant proportion of patients (61.9%) were still in remission or low disease activity. Of note, no patients were registered to be in a status of high disease activity at the end of the followup (Figure 1).

We did not experience a significant loss of efficacy requiring a return to IV monthly infusions, as reported by Reggia, *et al*. Possible explanations could be found in the study group characteristics. Our population was characterized by a relatively shorter period of IV treatment preceding the switch to SC ABA, a slightly shorter disease duration with a lower percentage of patients being treated with previous bDMARD, and a higher rate of combination therapy with csDMARD. Similarly, no safety concerns emerged from our study. The low number of patients in both Reggia's and our case series may also explain the different outcome of patients in real life. The ACTION Real World study<sup>5</sup> excluded significant differences in retention and efficacy between monotherapy and combination therapy.

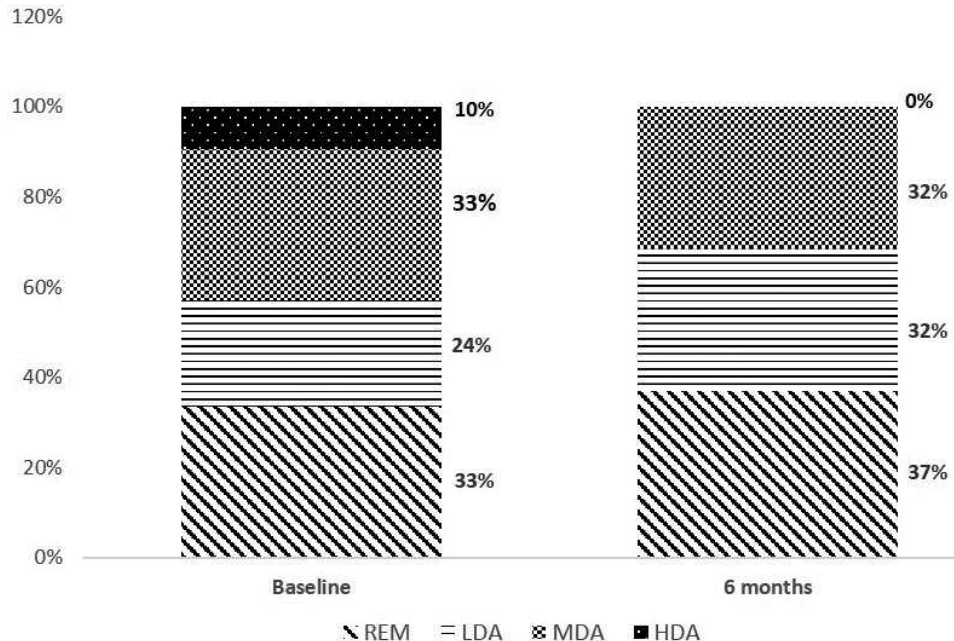


Figure 1. DAS28 status at baseline (at the time of ABA SC switch) and after 6 months of followup. REM: remission; LDA: low disease activity; MDA: moderate DA; HDA: high DA; DAS28: 28-joint Disease Activity Score; ABA: abatacept; SC: subcutaneous.

Our data, which need to be confirmed on larger cohorts, are in line with previous studies<sup>6</sup>, confirming the maintained efficacy and safety of ABA when switching between means of administration.

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