

Tapering antirheumatic drugs in a resource-poor setting: real-world evidence

Introduction of biological agents has undoubtedly revolutionised the management of different inflammatory rheumatic conditions; however, for Pakistani patients, it comes with a significant cost burden. We read with interest the article by van Mulligen *et al*,¹ and we concur with their conclusion that 'financial arguments may influence the decision to taper tumour necrosis factor-inhibitors first'. Being in a resource-poor country, the access to biological therapies is limited in our part of the world, and we would like to share our experience of tapering antirheumatic drugs.

After achieving remission or low disease activity (LDA), dosage reduction of biological disease-modifying antirheumatic drugs (bDMARDs) is an important topic in light of, not only the significant economic burden, but also as increasing number of patients who reach remission or LDA along with carrying the risk of unnecessary adverse events due to overtreatment. Hence, in our practice, we are inclined to keep these patients on the maximum tolerated doses/number of DMARDs and we plan the tapering of bDMARDs soon after achieving remission/LDA. Patients with inflammatory rheumatic disease who are given bDMARDs are followed up with a protocol on 4–6 weekly basis, and validated disease activity assessments are made (Disease Activity Score 28 (DAS 28) for rheumatoid arthritis (RA)²; disease activity in psoriatic arthritis and minimal disease activity for psoriatic arthritis (PsA)³; and Bath Ankylosing Spondylitis Disease Activity Index, Bath Ankylosing Spondylitis Functional Index, Ankylosing Spondylitis Disease Activity Score⁴ for ankylosing spondylitis (AS)). The protocol involves: continuation of baseline DMARDs and/or non-steroidal anti-inflammatory drugs (NSAIDs) on the maximum tolerated doses; after 3 months of bDMARDs introduction, if patient achieves remission or LDA, then 30% reduction in bDMARDs dose or about 30% prolongation of dosing interval is made; if patient remains in remission or LDA after 4 months of bDMARDs introduction, then 50% reduction in its dosage or dosing interval is made. In our country, the commonly available and licensed subcutaneous bDMARDs include: etanercept, tocilizumab and secukinumab.

In last 1 year, 47 patients were given bDMARDs (RA=26, spondyloarthritis (SpA) 21 (AS=12, PsA=9)) under our rheumatology services. By June 2020, 45 out of 47 patients have completed at least 3 months of bDMARDs therapy. For this study, only those patients who have completed 3 months of bDMARDs therapy was included (n=45). Among these 45 patients on bDMARDs, 12 patients were using etanercept, 18 patients were on tocilizumab and 15 patients used secukinumab. The median age of these patients was 34 years and a median disease duration of 9 years. Sixty per cent of the cohort was male. It was reassuring to note that 73% (n=33) of patients have successfully managed to reduce their bDMARDs without any significant flare and without any need for bDMARDs dose escalation (among them, five patients have completely stopped bDMARDs without any flare). All these patients have been maintained on the baseline DMARDs (NSAIDs in the case of AS). Interestingly, patients with SpA (AS and PsA) were noted to be more successful in reducing their bDMARDs than patients with

RA (18 out of 20 patients, 90%, vs 15 out of 25 patients, 60%; p=0.04). We also examined whether any particular biological drug has more favourable outcome as regards dose reduction, but no statistical difference was found (p=0.26). Within 1 year of commencing bDMARDs, we managed to reduce the overall exposure of bDMARDs by 41% in our cohort, reflecting in significantly less cost burden for our patients. Moreover, we plan to use these data to discuss with patients requiring bDMARDs.

We conclude that in our resource-poor clinical setting, a protocol-driven stepwise reduction of bDMARDs was successful as the first choice for tapering towards DMARD-free remission, and these data can potentially be used to help alleviate the anxiety of cost implications associated with bDMARDs.

Muhammad Haroon ¹, Zara Khan,² Maryam Aamer¹

¹Department of Rheumatology, Fatima Memorial Hospital & FMH College of Medicine and Dentistry, Lahore, Pakistan

²Department of Medicine, Pakistan Kidney and Liver Institute and Research Center, Lahore, Punjab, Pakistan

Correspondence to Dr Muhammad Haroon, Department of Rheumatology, Fatima Memorial Hospital & FMH College of Medicine and Dentistry, Lahore, Pakistan; mharoon301@hotmail.com

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ORCID iD

Muhammad Haroon <http://orcid.org/0000-0002-7383-7990>

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