

# Combining secukinumab and apremilast to successfully treat refractory psoriatic skin and joint disease: A novel approach

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To the Editor,

Several therapies have been approved to treat psoriatic arthritis (PsA), including relatively new additions of apremilast and secukinumab. However, no data exist on the safety or efficacy of apremilast in combination with IL-17 antagonists. We present a case of a highly refractory disease in a young man who was successfully treated with apremilast and secukinumab.

A 23-year-old male with childhood-onset chronic plaque psoriasis presented in our unit with recalcitrant skin and joint disease. Both his father and sister had challenging psoriasis as well. His prior treatments included a variety of oral immunomodulators, ciclosporin (discontinued because of severe mood changes), sulfasalazine (stopped due to erythrodermic flare), and methotrexate (both oral and subcutaneous) up to 25 mg weekly for 2 years with little benefit. Intractable nausea led to frequently missed doses and poor adherence.

Over subsequent years, he was on adalimumab monotherapy for 3 years, which was discontinued following secondary failure. This was promptly followed by ustekinumab for 9 months but had to be discontinued because of primary inefficacy. Then, he was then on infliximab for a year, which again had to be terminated following an inadequate response and a possible infusion reaction. All these therapies were prescribed at a different center.

At the first visit to our unit, both his skin and his joints' disease were uncontrolled. His psoriasis area severity index (PASI) was 9.3 and dermatology life quality index (DLQI) was 10. DLQI is calculated by adding the score of each question resulting in a score in the range of 0-30. The higher the score, the higher is the impairment in the quality of life. A change by at least four points is considered as clinically important (1). His psoriatic arthritis response criteria (PsARC) assessment revealed eight tender and seven swollen joints and both physician (PhGA) and patient (PtGA) global assessments were 4/5. His ESR was elevated (39 mm/h). The European quality of life-five domains (EQ5D) index value was -0.337, suggesting a major impact on the quality of life. Apremilast (30 mg twice daily) was commenced at this stage. Twelve weeks later there was a mild improvement in his joints with seven tender and five swollen joints. PhGA and PtGA were 3/5. His ESR had reduced to 9 mm/h. However, his skin disease worsened with DLQI of 15 and PASI of 16.2. Secukinumab was added to the therapy at a 300 mg monthly dose following weekly induction. At 16 weeks, there was substantial response with absolute clearance of the skin (PASI=0, DLQI=7). PsARC improvement was similar with two tender and no swollen joints. ESR normalized to 2 mm/h and both PhGA and PtGA were normal at 1/5. This was equivalent to achieving minimal disease activity (MDA) as he met five of the seven required criteria (swollen joints $\leq$ 1, PASI $\leq$ 1, pain VAS=10, PtGA=10, tender enthuses $\leq$ 1) (2). EQ5D also improved to 0.767. Nine months later, the disease remained well controlled with no adverse events, and no psychiatric complications were observed with either therapy.

To the best of our knowledge, this is the first report of a successful use of apremilast in combination with any IL-17 antagonist to treat PsA. There is some evidence of combination therapy in people with psoriasis to good effect; however, most of them are limited to case series and retrospective cohort reviews (3, 4). The data is limited and until now are unreported in PsA treatment. The ease of administration of apremilast as an oral agent coupled with a subcutaneous biological therapy makes it an attractive option for PsA treatment. However, although cost is a main consideration with this strategy (£16860/annum), it is still lower



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than the economic burden on an unemployed young man requiring several rescue therapies and frequent visits to a health care unit. Our case underscores the efficacy of combination therapy of apremilast and secukinumab with no major adverse effects, thus providing clinicians with an effective strategy to manage challenging cases of PsA.

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