Secukinumab dose optimization in adult psoriasis patients: A retrospective, multicenter case series

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INTRODUCTION

Secukinumab is an interleukin-17A monoclonal antibody approved in 2015 in Canada and the United States for the treatment of moderate-to-severe psoriasis in adult patients.[1,2] The current approved dosing regimen is 300 mg subcutaneous at weeks 0, 1, 2, 3, and 4, followed by monthly maintenance dosing starting at week 8.[3] In clinical practice, some patients only partially respond to this dosing schedule or display disease relapse during the interim between maintenance injections. Some clinicians treat these patients by using off-label secukinumab dosing regimens, which involves increasing the frequency of maintenance dosing. There are scant data on off-label regimens for secukinumab; therefore, this case series aims to evaluate the effectiveness and safety of secukinumab dose optimization.

We performed a retrospective chart review of adult patients treated with an off-label secukinumab up-dose regimen for psoriasis at 3 dermatology clinics in Ontario, Canada. Research Ethics Board approval was obtained at Sunnybrook Health Sciences Centre in Toronto. Effectiveness after dose optimization was measured using a 75% reduction from baseline in the Psoriasis Area and Severity Index (PASI-75), or a Physician Global Assessment (PGA) score of 0 (clear) or 1 (almost clear) if PASI scores were not provided. To assess safety, adverse events (AEs) were recorded.

Abbreviations used:

AE:	adverse event
PASI:	Psoriasis Area and Severity Index
PASI-75:	75% reduction from baseline PASI score
PGA:	Physician Global Assessment

CASES

Case summaries are presented in Table I.

Case 1

Case 1 was a 50-year-old woman with psoriasis on the arms, legs, and trunk. She did not achieve PASI-75 after 12 weeks of secukinumab treatment. At week 52, she had a PASI of 5.1, and her dose was optimized to 300 mg every 3 weeks. Complete clearance was achieved 12 weeks following optimization. No AEs were reported throughout treatment.

Case 2

Case 2 was a 60-year-old man with a baseline PASI of 11.4, with psoriasis affecting the arms, legs, trunk, and scalp. Despite achieving PASI-75 at week 12, his disease relapsed at week 52, and his dose was optimized to 300 mg every 3 weeks. PASI-75 (PASI 1.2) was achieved after 12 weeks. No AEs were reported throughout treatment.

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Table I. Case demographics and clinical features before and after secukinumab dosage optimization

					Approved dosing regimen				Optimized dosing regimen				
Case	Sex	Age, y	Weight, kg	Previously failed biologics	Baseline score	Follow-up week; score	PASI-75 achieved	Treatment duration, weeks	Scores before optimized regimen	Dosing regimen	Follow-up week; score	PASI-75 achieved	Concomitant systemic medications
1	F	50	79.0	Adalimumab	PASI 10.8	12; PASI 2.8	N	52	PASI 5.1	300 mg q3w	12; PASI 0	Y	None
2	M	60	96.0	Adalimumab	PASI 11.4	12; PASI 2.4	Y	52	PASI 6.8	300 mg q3w	12; PASI 1.2	Y	None
3	M	34	89.0	None	PASI 10.6	12; PASI 0.6	Y	35	PASI 5.2	300 mg q3w	12; PASI 1.2	Y	None
4	F	68	49.0	Etanercept, ustekinumab	PASI 14.6	12; PASI 7.9	N	12	PASI 7.9	300 mg q3w	12; PASI 1.6	Y	None
5	F	52	77.0	Efalizumab, adalimumab, etanercept, infliximab, ustekinumab	PASI 14.5	12; PGA 1	NA	65	NA	300 mg q2w	12; PGA 1	NA	Methotrexate
6	M	52	62.0	Etanercept	PASI 13.5	12; PGA 0	NA	65	NA	300 mg q2w	12; PGA 0	NA	None
7	M	63	109.1	Ustekinumab	PGA 3	5; improved	NA	26	PGA 3	300 mg/w for 2 weeks, then q3w thereafter	30.5; PGA 3	NA	Allitretinoin
8	M	66	NA	Alefacept, etanercept, adalimumab, ustekinumab	NA	12; PGA 4	NA	48	PGA 4	300 mg q3w	12; PGA 3	NA	Apremilast
9	M	66	NA	Adalimumab	PGA 4	26; PGA 3	NA	52	PGA 2	300 mg q3w	8; PGA 1	NA	None
10	F	38	NA	Ustekinumab, adalimumab	NA	26; improved	NA	30.5	PGA 4	300 mg q2w	22; PGA 1	NA	Methotrexate
11	M	18	NA	None	NA	12; PGA 0	NA	12	PGA 0	300 mg q2w	17; PGA 0	NA	None
12	M	60	90.9	Ustekinumab, adalimumab	PGA 2	12; PGA 2	NA	82.5	PGA 2	300 mg q3w	12; PGA 2	NA	None
13	F	53	NA	Etanercept, ustekinumab, adalimumab	PGA 0	NA	NA	35	PGA 2	300 mg q2w	12; PGA 0	NA	None
Mean		52.3	81.5 (n = 8)					43.6	PASI 6.25 (n = 4)				

N, No; *NA*, data not available; *PASI*, Psoriasis Area and Severity Index; *PASI-75*, 75% reduction from baseline PASI score; *PGA*, Physician Global Assessment; *q2w*, every 2 weeks; *q3w*, every 3 weeks; *Y*, yes.