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Combination use of systemic therapies in recalcitrant psoriasis

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Background: Treatment of moderate to severe psoriasis or psoriatic arthritis often poses a challenge to the physician. Patients with moderate to severe disease frequently do not respond to initial, non-systemic therapies such as topical medications or phototherapy. The next step in treatment for these patients is initiation of a single-agent systemic therapy. However, systemic monotherapy is often insufficient in attaining the desired level of control, and increasing the dose of many of the first-line medications may pose a safety risk to the patient. As such, combination therapies are frequently used in these difficult cases. There is a paucity of literature related to combination therapies involving newer agents, such as biologic drugs. Initial investigations suggest that biologics in combination with cyclosporine, methotrexate, acitretin, or even another biologic are promising options for recalcitrant plaque psoriasis.

Methods: In this retrospective chart review, all patients billed with the ICD-10 code L40.0 (psoriasis vulgaris) at a single U.S. tertiary referral center in the past two years were identified. Anonymized data that were collected included sex, year of birth, age at diagnosis, psoriasis type, presence of psoriatic arthritis, comorbidities, previous therapies, clinical severity before and after combination treatment, and adverse events experienced.

Results: Of the 523 patients billed for a diagnosis code of psoriasis in the past two years, there were 47 patients who met inclusion criteria. They represented 60 distinct treatment combinations. The combinations we evaluated were, for the most part, one biologic drug with one traditional oral therapy (Table 1). Despite the severity and history of prior treatment failure in our cohort, 65% of combination regimens elicited at least a 50% response. Only 6% of combinations resulted in no clinical response (defined as less than 25% improvement). While there were no statistically significant differences among the unique combinations, methotrexate in combination with a biologic was the regimen that appeared to produce the best response ($p=0.115$).

Conclusion: We conclude that combination therapy should be considered in patients with recalcitrant psoriasis who have failed multiple single-agent regimens. Our results suggest methotrexate may be particularly effective in combination with a biologic agent.

Class	Drug	Patients (n)	Percentage (%)
Traditional Oral Therapy	Methotrexate	24	40.0
	Cyclosporine	19	31.7
	Acitretin	25	41.7
	Apremilast	3	5.0
TNF- α Inhibitor	Etanercept	9	15.0
	Adalimumab	7	11.7
	Infliximab	6	10.0
	Golimumab	2	3.3
IL-12/23 Inhibitor	Ustekinumab	23	38.3
IL-17 Inhibitor	Secukinumab	9	15.0
	Ixekizumab	3	5.0

Table 1: Frequency of Specific Drugs in Combination
TNF, Tumor Necrosis Factor; IL, Interleukin

Biography

Lauren Bonomo, BA, graduated with honors from Yale University and is now a Medical student at the Icahn School of Medicine at Mount Sinai. She is currently on a scholarly year, pursuing research in Icahn's Department of Dermatology. She is particularly interested in inflammatory and autoimmune skin disease, including atopic dermatitis, psoriasis, vitiligo, and alopecia areata.

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