RESEARCH LETTERS

Pulse corticosteroid therapy with oral dexamethasone for the treatment of adult alopecia totalis and universalis

To the Editor: The alopecia areata (AA) subtypes alopecia totalis (AT) and alopecia universalis (AU) are associated with poorer prognosis[1] and are challenging to treat. Different regimens of pulse corticosteroid therapy have been described,[1-5] with variable rates of effectiveness and adverse effects. The objective of this study was to evaluate the efficacy and safety of a new regimen of pulse corticosteroid therapy with oral dexamethasone (PCT-OD) for adult patients with AT/AU.

In this prospective study, adult patients diagnosed with AT/AU were administered PCT-OD at a dosage of 0.1/mg/kg/day twice weekly. Oral calcium/vitamin-D was also supplemented for all patients. Patients were followed up for at least 3 months after discontinuation of dexamethasone. Therapeutic response was assessed as no response (no regrowth), partial response (regrowth on <75% of the scalp), or complete response (regrowth on ≥75% of the scalp). Therapy was slowly tapered or discontinued with complete regrowth or no response/evolution after 4 months of therapy. Persistent response was defined as the maintenance of >75% regrowth for at least 3 months after therapy withdrawal.

The sample included 31 patients (19 women [61%] and 12 men [39%]) with a mean age of 35.2 years (range, 19-54 years). AU and AT were present in 22 (71%) and 9 (29%) patients, respectively. Twelve patients (39%) had previously undergone other systemic therapy, without response. All patients received PCT-OD. The mean dosage used was 8.0 mg/day (range, 4-12 mg/day), 2 consecutive days each week. Therapeutic response was observed in 25 patients (80.6%), with complete response in 22 (71%) patients (Fig 1) and partial response in 3 (10%) patients. The mean time until response was 1.55 months (range, 1-3 months), while the mean

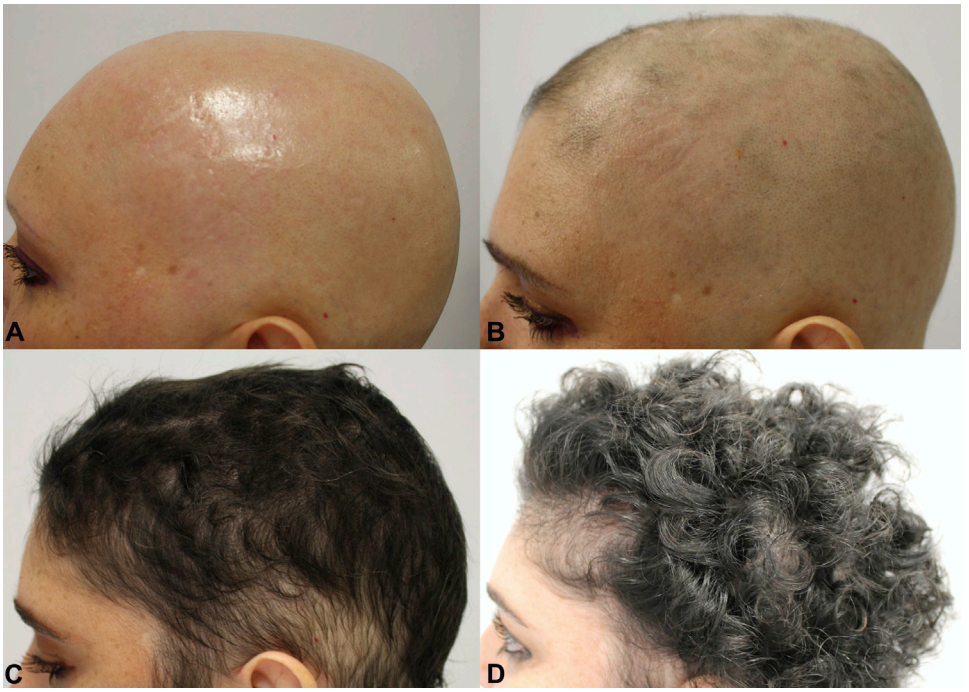

Fig 1. Alopecia universalis. Treatment with pulse corticosteroid therapy with oral dexamethasone at a dosage of 8 mg/day biweekly in a 35-year-old female diagnosed with alopecia universalis. **A**, Initial image; **B**, 3 months of therapy: initial regrowth of scalp hair and eyebrows; **C**, 6 months of therapy: almost complete regrowth of scalp hair; **D**, 12 months of therapy: complete regrowth of scalp hair.

Table I. Published series of patients with alopecia totalis and universalis treated with pulse corticosteroid therapy

	Current study, 2015	Yang, 2013[1]	Deshpande, 2011[2]	Nakajima, 2007[4]	Kurosawa, 2006 (I/II)*[3]	Kurosawa, 2006 (II/II)*[3]	Sharma, 1999[5]
Number of patients with AU/AT	31	24	8	25	12	12	25†
Males/females (%)	39/61	NS	NS	28/72	NS	NS	66/33
AU/AT (%)	71/29	NS	87/13	NS	NS	NS	NS
Mean age	35.2 years	NS	NS	NS	NS	NS	23.6 years
Prognostic factors associated to better response	AAT	Recent-onset AA (<1 year)	NS	Recent-onset AA (<1 year)	NS	NS	NS
Treatment	Oral DXM 0.1 mg/kg/d 2 consecutive days each week	Oral prednisolone or intravenous methylprednisolone 2.5 to 10.0 mg/kg per day 3 consecutive days each month	Oral betamethasone 0.1 mg/kg/d 2 consecutive days each week	Intravenous methylprednisolone 500 mg/day 3 consecutive days each month	Oral prednisolone 80 mg 2 consecutive days each 3 months	Intramuscular triamcinolone 40 mg/month	Oral DXM 5 mg, 2 consecutive days each week
Initial response	Total: 81% (Complete: 71% + partial: 10%)	Total: 38%	Total: 62% (Complete: 50% + partial: 12%)	Total: <21%	Total: 59%	Total: 67%	Total: 80%† (Complete: 63% + partial: 16%)
Time until response (months)	1.5	NS	3-6	NS	3-6	3-6	5.3
Persistent response	32%	NS	37%	NS	53%	25%	NS
Adverse effects	32%	NS	25%	"Frequent but mild"	10%	41%	27%

AA, Alopecia areata; *AT*, alopecia totalis; *AU*, alopecia universalis; *DXM*, dexamethasone; *NS*, not specified.

*There were 2 subgroups in this study.

†In the study of Sharma et al, 25 patients with extensive AA (more than 40% scalp affected) were included, although there were no patients with AT/AU.

duration of therapy was 12.9 months (range, 4-24 months). A persistent response was observed in 10 patients (32%). All patients with AT (n = 9) had a complete response; the subtype of AT was the only significant variable associated with response ($P = .015$). Adverse effects were detected in 10 patients (32%): weight gain in 9 patients and Cushing syndrome, striae, and irritability in 1 patient. Adverse effects were more frequent in patients receiving a higher dosage. Treatment had to be discontinued for only 1 patient.

Systemic corticosteroids in daily therapy, mini-pulse therapy, and pulse therapy have been used to treat AT/AU, with varied success from 36% to 75%.[2] Pulse therapy is effective and has a lower rate of adverse effects.[1-5] The use of oral mini-pulse of dexamethasone for AA has been previously reported (Table I)[5]; however, patients with AT/AU were not included. Other studies describing corticosteroid pulse therapy for AT/AU report response rates of 59% to 67% (Table I), which are slightly lower than the present results. Interestingly, the reported rate of adverse effects in these studies (10%-41%) was similar to the present rate (33%); in general, the adverse effects were mild and transient. The present study is limited by the absence of a control group.

In conclusion, treatment with PCT-OD at a dosage of 0.1 mg/kg/day biweekly is a potential therapeutic option for adults with AT/AU.

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REFERENCES

1. Yang CC, Lee CT, Hsu CK, et al. Early intervention with high-dose steroid pulse therapy prolongs disease-free interval of severe alopecia areata: a retrospective study. *Ann Dermatol*. 2013;25(4):471-474.
2. Deshpande D, Dhurat R, Saraogi P, Mishra S, Nayak C. Extensive alopecia areata: not necessarily recalcitrant to therapy!. *Int J Trichology*. 2011;3(2):80-83.
3. Kurosawa M, Nakagawa S, Mizuashi M, et al. A comparison of the efficacy, relapse rate, and side effects among three modalities of systemic corticosteroid therapy for alopecia areata. *Dermatology*. 2006;212(4):361-365.
4. Nakajima T, Inui S, Itami S. Pulse corticosteroid therapy for alopecia areata: study of 139 patients. *Dermatology*. 2007;215(4):320-324.
5. Sharma VK, Gupta S. Twice weekly 5 mg dexamethasone oral pulse in the treatment of extensive alopecia areata. *J Dermatol*. 1999;26(9):562-565.

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Treatment of recalcitrant adult alopecia areata universalis with oral azathioprine

To the Editor: Treatment of alopecia areata universalis (AAU) is challenging, and systemic and even immunosuppressive drugs are often required. Therapy with topical immunotherapy with diphencyprone (DFCP) and oral corticosteroids are the most used treatments in adult patients with AAU. Some patients are resistant to multiple therapies.[1,2] The objective of this study was to evaluate the efficacy and safety of oral azathioprine for adult patients with recalcitrant AAU.

A prospective study including adult patients with recalcitrant AAU (non-responders to oral corticosteroids and DFCP) between 2010 and 2015 was designed. Treatment with azathioprine at a dosage of 2.5 mg/kg/day (adjusted based thiopurine methyltransferase [TPMT] level) was administered. Therapeutic response was assessed as no response (no regrowth), partial response (regrowth of <75% of scalp), and complete response (regrowth of 75% or more of scalp). Persistent response was defined as the maintenance of >75% of regrowth after 6 months of the withdrawal of therapy.

Overall, 14 patients (8 females [57%] and 6 males [43%]) with a mean age of 37.7 years (range, 23-59 years) were included. The mean time since onset of AAU was 24.5 months (range, 8-72 months). The mean dosage of azathioprine used was 142 mg daily. Therapeutic response was observed in 6 of 14 patients (43%), all of them achieving complete response, also including regrowth of body hair (Fig 1). There were no identifiable prognostic factors statistically associated with better response. The mean time until response was 4.7 months (range, 4-6 months), while the mean duration of therapy was 9.8 months (range, 1-36 months). Two patients (14.3%) presented with relapses after a mean time of 2.5 months after the withdrawal of azathioprine.