Table SI. *Overview of studies comparing topical corticosteroids (TCS) with wet wrap therapy (WWT) vs. conventional (conv) 'open' treatment with TCS*

Study	Objective	Design	Study population	AD definition and outcome measurement	Duration	Treatment	Outcome	Side-effects	Follow-up after end of treatment	Comments
Foelster-Holst et al. 2006 (27)	Comparing the efficacy of prednicarbat with and without wet-wrap dressing	Prospective, randomized, controlled, left–right study	24 patients, 20 adults (18–63 years) 4 children (6–16 years)	AD patients with acute episode (AD definition not reported) AD severity measured by local SCORAD	2–3 days	Extremities treated with prednicarbat, one arm/leg was randomly covered with WW dressing	No dropouts Improvements in both groups. Decrease of the local SCORAD in the corticosteroid plus wet-wrap dressing group was significantly better.	No side effects during study and 14 days post treatment	14 days follow-up regarding side-effects (none)	No information on re-wetting and daily duration of WWT. No systemic corticosteroids/AB 7 days or topical TCS 2 days before study
Hindley et al. 2006 (28)	Compare "wet wrap" bandages vs. conventionally applied ointments	Prospective, single-blinded randomized study	50 patients, 4–27 months	Moderate/severe AD. (AD defined by H&R) AD severity by SCORAD	4 weeks	WWT group: week 1: WWT 24 h + 1% HC OD. Week 2–4: 12–24 h WWT, (depending on evaluation) + 1% HC OD Conventional group: 1% HC TD +emollients	45 patients completed (23 WWT/ 22 conventional) 4 dropped out from WWT group No significant difference between groups Same amount of CS used between groups	5 (WWT) vs. 0 (conv.) children treated with AB during study No other side effects reported	No follow-up	No information on re-wetting
Beattie & Lewis-Jones 2004 (29)	Comparing WWT with hydrocortisone to conventional therapy of HC and emollients for moderate widespread AD	Randomized, controlled study	19 patients, 4 months–3 years	AD covering 30% or more body surface area (AD definition not reported) AD Severity: SASSAD	2 weeks with active treatment 2 weeks with emollients only	WWT group: Week 1: HC OD, WWT TD Week 2: HC and WWT OD Conventional group: week 1+2: HC TD	4 dropouts in WWT group due to infections, non-compliance and treatment failure 1 dropout in conv. group not related to treatment After 2 weeks: Greater mean fall in SASSAD in conv. group, not significant	Only report on folliculitis in two patients in WWT-group No other comments on side effects	Controls at week 3 and 4 Week 4 control: Raise in mean SASSAD for 4 patients in WWT-group vs. 9 in conv. group	No significant difference between amounts of TCS used in the 2 groups No reports on re-wetting
Pei et al. 2001 (32)	Compare 1:10 diluted 0.1% MF vs 1:10 diluted 0.05% FP with or without WWT	Randomized, single-blinded study	40 children, 1–15 years	Moderate to severe AD (AD defined by UK criteria) AD severity: Personal disease severity-, extent of disease-score	4 weeks	The first 2 weeks both groups received CS OD (MF or FP) TD, no dressings Last 2 weeks randomized to either CS (OD)+WWT (8 h over night) or CS (OD) conv	27 patients completed. 10 did not qualify to last 2 weeks because of improvement, 1 did not tolerate WWT, 2 after week 1 were not satisfied with result No differences between CS's Patients with WWT significant less disease severity/disease extent. Groups without WWT less, but not significant disease severity/disease extent	No potential side effects reported	No follow-up	Patients had to have active disease despite use of moderately potent TCS was included No systemic steroid, immunosuppressive or AB <6 weeks and TCS 2 weeks before study No reports on re-wetting The patients only qualified to enter the last 2 weeks if <50% improvement in first 2 weeks

AD: atopic dermatitis; AB: antibiotics; SCORAD: scoring atopic dermatitis (53, 54); SASSAD: the six area, six sign atopic dermatitis severity score (51); H&R: Hanifin and Rajka AD criteria (58); HC: hydrocortisone; MF: mometasone furoate; FP: flucasone propionate; OD: once daily; TD: twice daily; UK criteria: UK working party AD criteria (59).