

Appendix 3: Supplementary tables and figure [posted as supplied by author]

Table A Results of the meta-analysis and subgroup analysis of RCTs assessing the effects of single-dose corticosteroids on complete resolution of pain at 24 and 48 hours, and relapse of the symptoms

Outcome/subgroups		No. of trials	RR	95% CI		No. of participants		I ²	P value for interaction
				Lower	Upper	Intervention	Control		
Complete resolution of pain at 24 hours**	Adults	4	2.9	1.2	6.9	507	453	75.2	0.261
	Children	1	1.2	0.5	2.5	51	38	-	
	Intramuscular	2	4.6	1.6	13.0	96	84	33.0	0.335
	Oral	4	1.7	1.0	3.0	514	473	54.1	
	Primary care	2	2.1	0.7	6.6	410	369	79.6	0.815
	ED	3	2.7	0.9	8.1	148	122	71.2	
	Total	5	2.2	1.2	4.3	558	491	69.0	-
Complete resolution of pain at 48 hours**	Adults	3	1.5	1.2	1.9	513	468	33.0	0.853
	Children	1	1.4	0.95	1.99	48	47	-	
	Intramuscular	1	1.8	1.3	2.4	60	64	-	0.188
	Oral	3	1.4	1.1	1.7	501	451	0.0	
	Primary care	2	1.4	1.1	1.7	453	404	0.0	0.405
	ED	2	1.6	1.2	2.1	108	111	13.9	
Total	4	1.5	1.3	1.8	561	515	3.2	-	
Relapse of the symptoms	Adults	1	0.2	0.0	2.0	41	44	-	***
	Children	2	0.5	0.2	1.7	199	173	22.8	
	Low risk of bias	2	0.5	0.2	1.7	199	173	22.8	***
	High risk of bias	1	0.2	0.0	4.0	60	31	-	
	Total	3	0.5	0.2	1.7	199	173	22.8	-

ED: emergency department; RR: relative risk;

*Culture-positive or positive test for group A beta-hemolytic streptococcus (GABHS) rapid test.

** All RCTs for this outcome were at low risk of bias.

*** Due to small number of trials, we did not perform a statistical test of interaction between the two group.

Table B Results of the meta-analysis and subgroup analysis of RCTs assessing the effects of single-dose corticosteroids on mean time to onset of pain relief and to complete resolution of pain, and absolute pain reduction score (at 24 hours)

		No. of trials	Mean difference	95% CI		No. of participants		I ²	P value for interaction
				Lower	Upper	Intervention	Control		
Mean time to onset of pain relief	Adults	6	-4.9	-8.2	-1.5	310	288	81.0	0.986
	Children	2	-4.8	-13.1	3.6	149	160	83.2	
	Intramuscular	4	-7.0	-10.3	-3.6	456	448	73.0	0.090
	Oral	5	-3.0	-6.1	-0.1	459	448	64.2	
	Primary care	1	0.5	-4/1	5.1	129	102	-	**
	ED	7	-5.5	-8.5	-2.6	330	346	77.0	
	Pathogen positive*	4	-5.6	-8.0	-3.2	122	128	0.0	0.651
	Pathogen negative	4	-4.1	-10.0	1.8	147	105	66.6	
	Low risk of bias	4	-4.8	-7.8	-1.9	459	448	78.3	0.810
	High risk of bias	4	-5.1	-8.1	-2.1	165	177	59.5	
	Total	8	-4.8	-7.8	-1.9	459	448	78.3	-
Mean time to complete resolution of pain	Adults	4	-14.1	-26.8	-1.3	204	207	84.4	0.613
	Children	2	-5.2	-20.7	10.3	149	160	72.1	
	Intramuscular	3	-22.4	-27.3	-17.5	103	113	0.0	0.001
	Oral	3	-1.5	-12.6	9.5	250	254	62.6	
	Primary care	1	5.8	-6.5	18.1	101	94	-	0.281
	ED	5	-14.5	-24.6	-4.5	252	273	79.7	
	Pathogen positive*	3	-7.5	-22.3	7.2	92	112	59.7	0.886
	Pathogen negative	3	-9.6	-34.1	14.8	96	86	69.8	
	Low risk of bias	3	-6.0	-27.4	15.4	224	228	93.3	0.302
	High risk of bias	3	-17.7	-24.2	-11.3	129	139	0.0	
	Total	6	-11.1	-21.8	-0.4	353	367	84.5	-
Absolute pain reduction (at 24 hours)	Adults	6	1.5	0.9	2.2	477	461	52.1	0.322
	Children	2	0.8	-0.5	2.1	149	160	77.3	
	Intramuscular	3	1.5	0.8	2.2	624	621	0.0	0.695
	Oral	6	1.3	0.5	2.0	626	621	74.3	
	Primary care	2	1.5	-0.8	3.9	328	316	88.5	0.781
	ED	6	1.2	0.6	1.8	298	305	49.9	
	Pathogen positive*	3	1.2	-0.2	2.6	92	112	75.9	0.926
	Pathogen negative	3	1.3	-1.3	3.9	96	86	84.0	
	Low risk of bias	4	1.0	-0.1	2.2	461	444	-	0.353
	High risk of bias	4	1.6	1.1	2.2	165	177	80.8	
	Total	8	1.3	0.7	1.9	626	621	65.1	-

ED: emergency department; RR: relative risk;

*Culture-positive or positive test for group A beta-hemolytic streptococcus (GABHS) rapid test.

** Due to small number of trials in one subgroup, we did not perform a statistical test of interaction between the two group.

Table C point estimates for outcomes across included articles to investigate selective outcome reporting

study	Pain at 24 hours	Pain at 48 hours	Time to onset of pain relief	Time to complete resolution of pain	Absolute Pain Reduction	Relapse of symptoms
	RR	RR	MD	MD	MD	RR
O'Brien, 1994	-	-	-6.1	-20.4	1.3	-
Marvez-Valls, 1998	-	-	-5.0	-13.8	1.6	-
Wei, 2002	2.6	-	-4.7	-	1.0	-
Bulloch, 2003	-	-	-0.5	2.3	0.2	1.0
Ahn, 2003	-	-	-1.4	-	1.9	-
Kinderman, 2005	4.1	1.7	-	-	2.7	0.2
Olympia, 2005	-	-	-9.0	-13.5	1.5	0.2
Niland, 2006	1.2	1.4	-	-	-	-
Tasar, 2008	8.8	1.8	-11.8	-24.8	-	-
Hayward, 2017	1.3	1.3	0.5	5.8	0.3	-

RR: relative risk; MD: mean difference

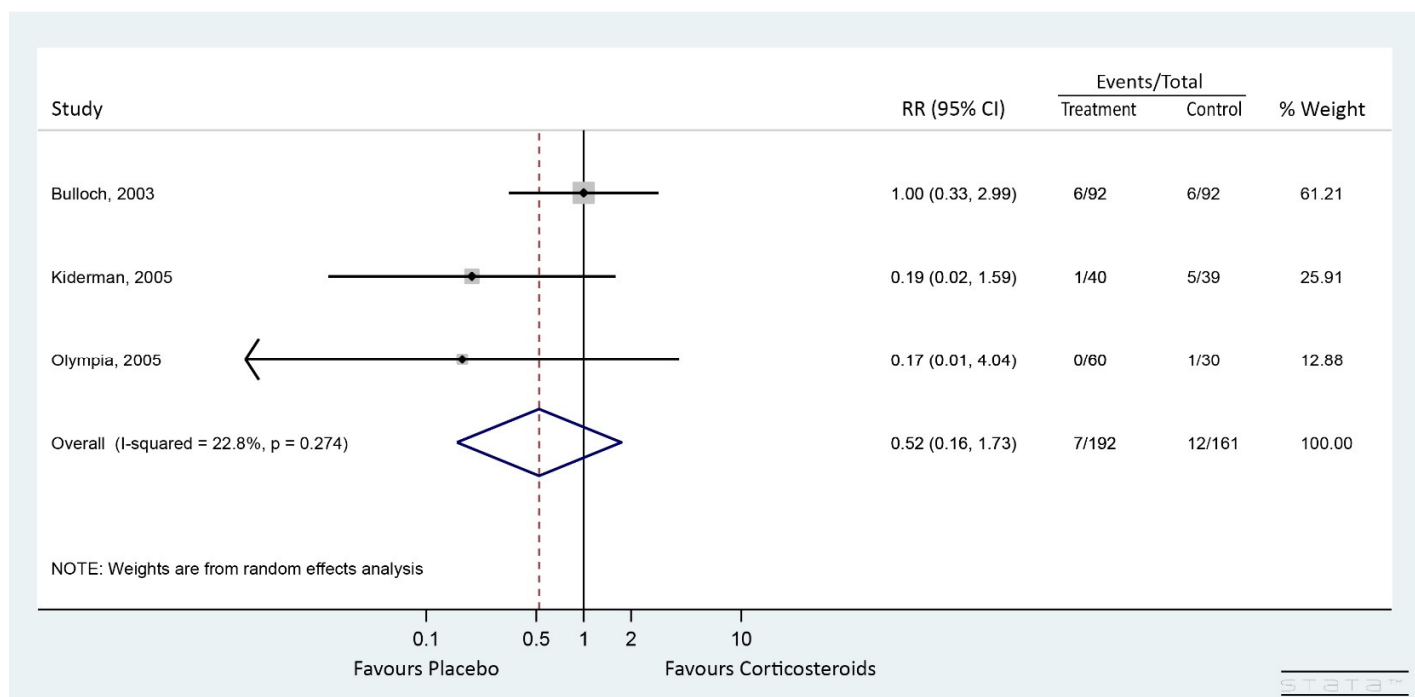


Fig A Forest plot showing relative risk (RR) for relapse/recurrence of symptoms for corticosteroid vs. placebo groups. Horizontal bars denote 95% CIs. Studies are represented as squares centred on the point estimate of the result of each study. The area of the square represents the weight given to the study in the meta-analysis. The pooled RR was calculated by DerSimonian–Laird random-effects model. The diamond represents the overall estimated effect and its 95% CI in total (centre line of diamond, dashed line). The solid vertical line is the line of no effect.