

**Intranasal  
Corticosteroids in  
Management of Acute  
Sinusitis: A  
Systematic Review  
and Meta-Analysis**

# RESULTS

- 1. intranasal corticosteroids offer a small but significant symptomatic benefit in acute sinusitis. This effect is most marked when patients are given longer durations of treatment (21 days) and higher doses of the medication.
- 2. trials reported no serious adverse events associated with intranasal corticosteroid use and no increase in frequency of nonserious adverse events compared with placebo.

- 3.the corticosteroid group had a significantly higher subjective level of work performance.
- 4.evidence of a dose-response relationship for mometasone furoate nasal spray: larger doses were associated with a greater likelihood of symptom resolution. we recommend doses of 800  $\mu\text{g}$  of mometasone furoate daily.

Table 1. Characteristics of Trials Included in the Meta-Analysis

Study (Year and Location)	Age Range (Mean), y	No. Analyzed		Criteria for Sinusitis; Duration of Symptoms at Entry
		Intervention	Control	
Williamson et al <sup>14</sup> (2007; United Kingdom, general practice)	≥16 (42.5)	102 <sup>a</sup>	105 <sup>b</sup>	2 of following: predominantly unilateral purulent nasal discharge and local pain, bilateral purulent nasal discharge, pus on inspection Median duration of symptoms 7 days (IQR 10)
Meltzer et al <sup>17</sup> (2005; 14 countries, medical centers)	≥12 (35.3)	478	252	Symptoms score ≥5/15 (scores of 0 = none to 3 = severe for facial pain, nasal congestion, headache, rhinorrhea, and postnasal drip) Clinical signs/symptoms for >7 days but <28 days
Nayak et al <sup>18</sup> (2002; United States, 61 treatment centers)	≥12 (39.1)	642	325	Coronal CT evidence of sinusitis Total symptom score of ≥6/18 (scores of 0 = none to 3 = severe for facial pain, nasal congestion, headache, rhinorrhea, cough, and postnasal drip) No information on duration given
Dolor et al <sup>20</sup> (2001; United States, 12 primary care and 10 otorhinolaryngology clinics)	≥18	47	48	History of recurrent sinusitis Clinical criteria: 2/5 of headache; facial pain and pressure; nasal congestion; purulent nasal discharge; and olfactory disturbance; and Water radiographic or endoscopic evidence of sinusitis No information on duration given

Meltzer et al<sup>21</sup>  
(2000; United States, 29 medical centers, outpatient)

≥12 (40.4)

200

207

History of sinusitis episodes separated by symptom-free periods  
Symptom score >6/18 (scores of 0 = none to 3 = severe on facial pain, nasal congestion, headache, rhinorrhea, cough, and postnasal drip) and coronal CT evidence of sinusitis  
Mean duration of symptoms 13.5 days

Barlan et al<sup>19</sup> (1997; Turkey, pediatric outpatient clinic)

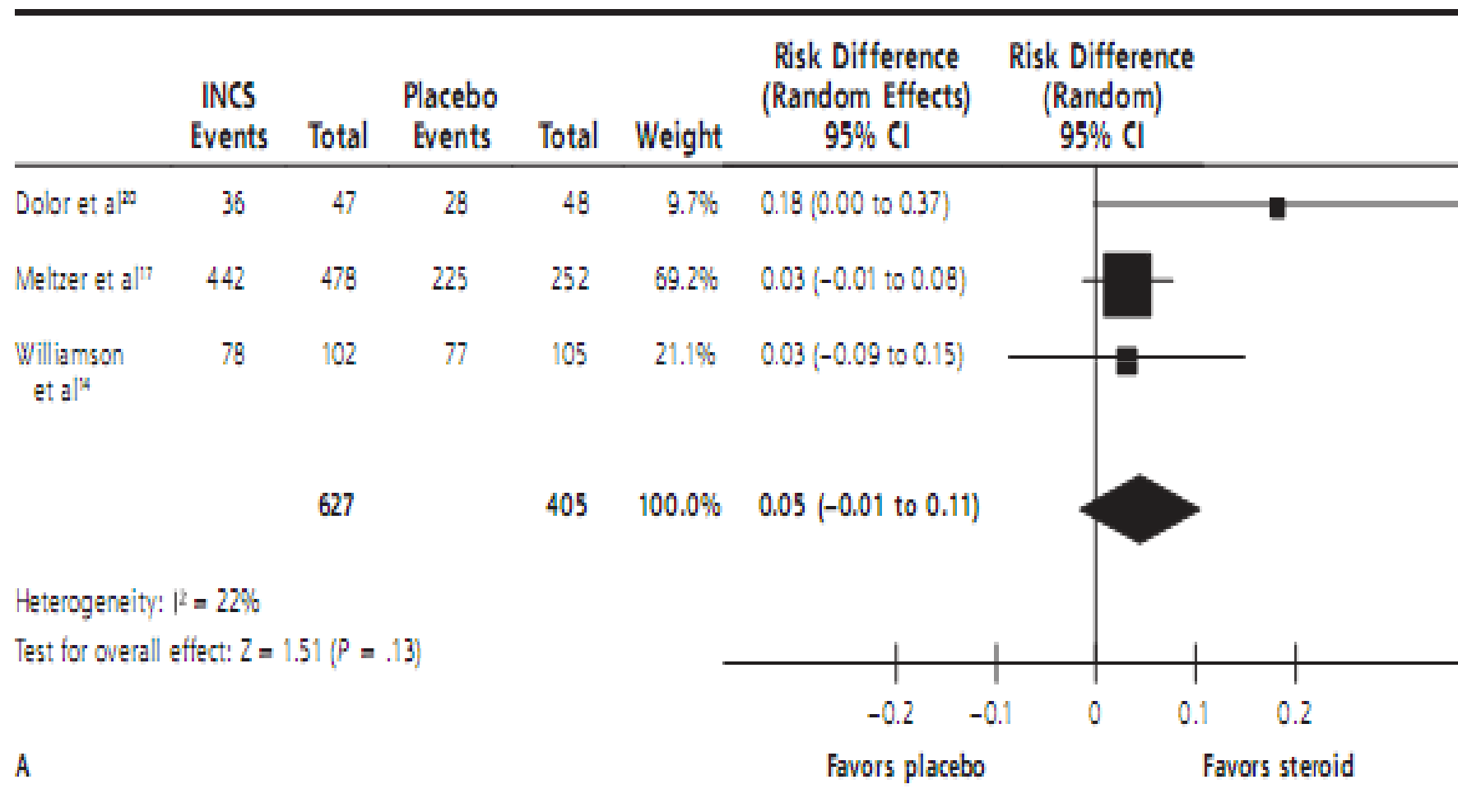
≤15 (6.95)

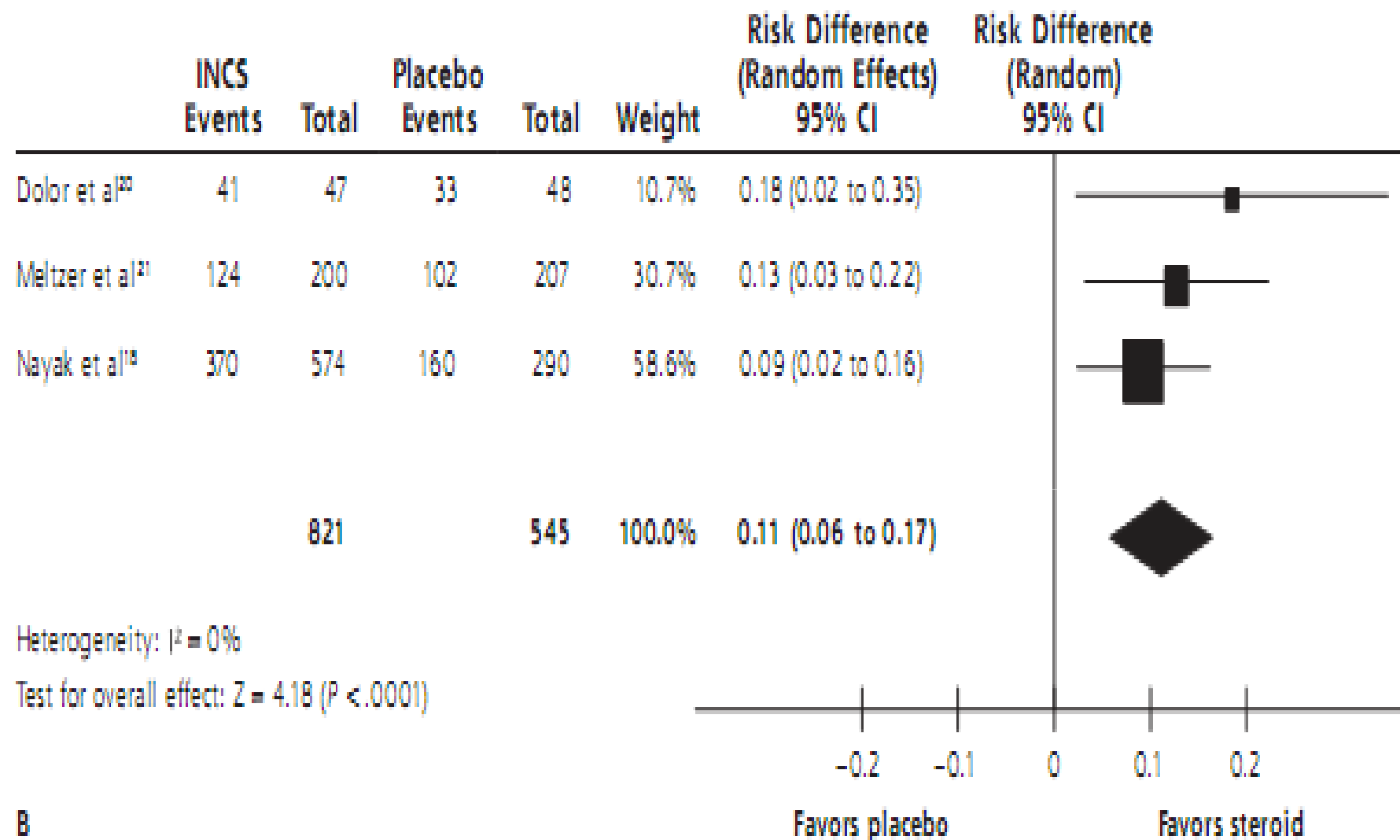
43

46

Clinical criteria: 2/3 of purulent nasal discharge, purulent pharyngeal drainage, and cough, or 1/3 of the above plus 2 of facial or tooth pain, edema, earache, sore throat, wheeze, headache, fever, and foul breath  
No information on duration given

Figure 2. Effect of intranasal steroids on resolution of symptoms of acute sinusitis at (A) 14 to 15 days and (B) 21 days.





INCS = intranasal steroid.

**Figure 3. Dose-response relationship of mometasone furoate and likelihood of symptom resolution.**

