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Erratum

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In the article by Labarca et al. entitled "Bronchoscopic Lung Volume Reduction with Endobronchial Zephyr Valves for Severe Emphysema: A Systematic Review and Meta-Analysis" [Respiration. 2019;98:268–78, DOI: 10.1159/000499508], the following error has been reported by the authors:

After an internal revision of the results published in our systematic review [1], we found an error regarding the extracted data from BeLieVeR-HIFi [2]. In this study, the main reports were expressed in medians, not in means as in other trials. These changes in the units of measure resulted in updates to the result of some meta-analysis.

In Figure 3 and the Results section, pooled FEV_1 change from 17.63% (9.28, 25.45) with heterogeneity significant (I^2 = 78%, p = 0.0001) to 20.74% (15.68, 25.79) with heterogeneity not significant (I^2 = 25%, p = 0.25). Second, in Table 2 and Figure 4, subgroup analysis of FEV_1 according to emphysema distribution, the heterogeneous subgroup, FEV_1 changed from 21.78% (8.70, 34.86) with heterogeneity significant (I^2 = 89%, p < 0.00001) to 25.98% (17.72, 34.24) and heterogeneity not significant (I^2 = 58%, p = 0.07). Third, in Figure 6, 6MWT changed from 49.75 mts (28.75, 70.75) with heterogeneity significant (I^2 = 70%, p = 0.010) to 53.10 mts (34.72, 71.49) and heterogeneity not significant (I^2 = 54%, p = 0.07). In Figure 7, residual volume changed from –0.53 L (–0.75, –0.32) with heterogeneity significant (I^2 = 59%, p = 0.04) to –0.57 L (–0.76 to –0.39) and heterogeneity not significant (I^2 = 37%, p = 0.18). Finally, SGRQ in this study was –8.72 points. After the corresponding modifications were applied in the overall analysis as well as the subgroup analysis, there is no longer evidence of significant heterogeneity (Table 3).

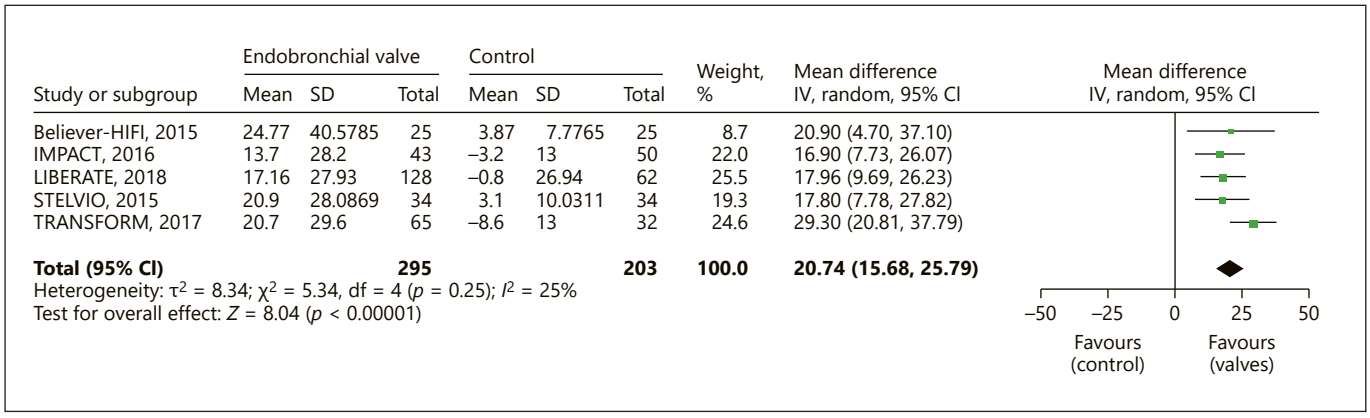

Fig. 3. Change in forced expiratory volume in 1 s in patients with collateral ventilation using Zephyr® valves.

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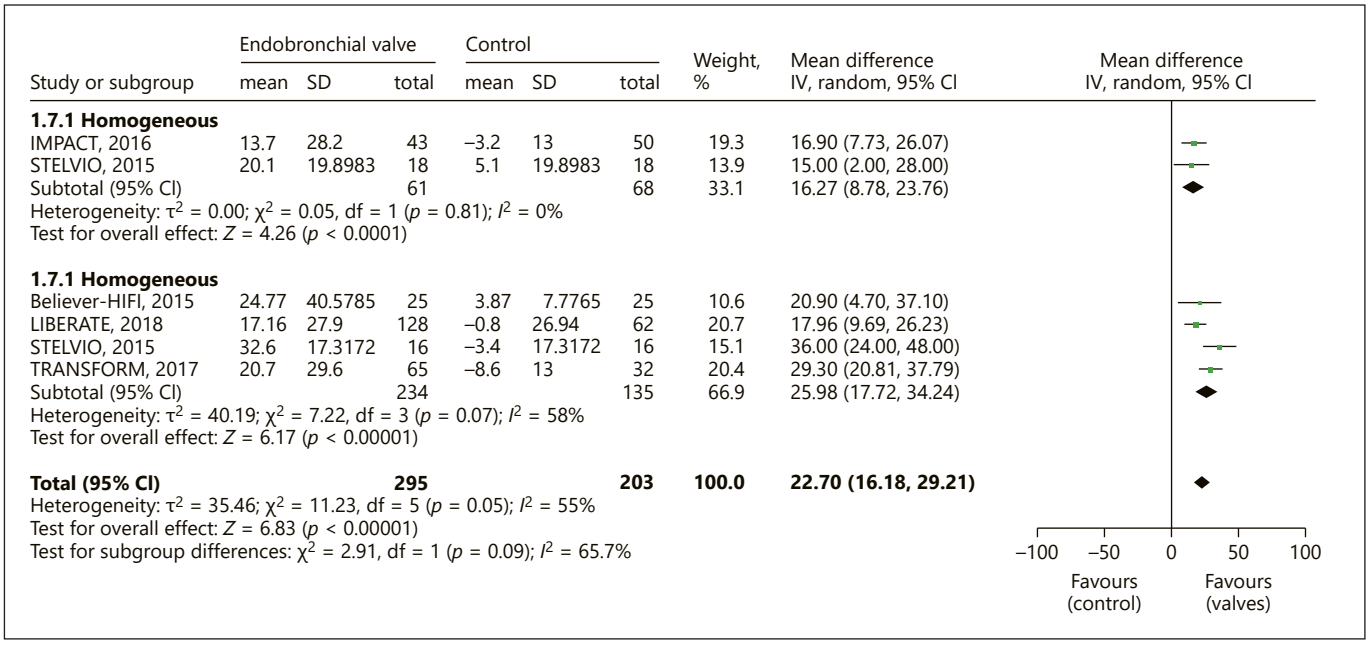

Fig. 4. Subgroup analysis. Change in forced expiratory volume in 1 s after treatment according to emphysema distribution.

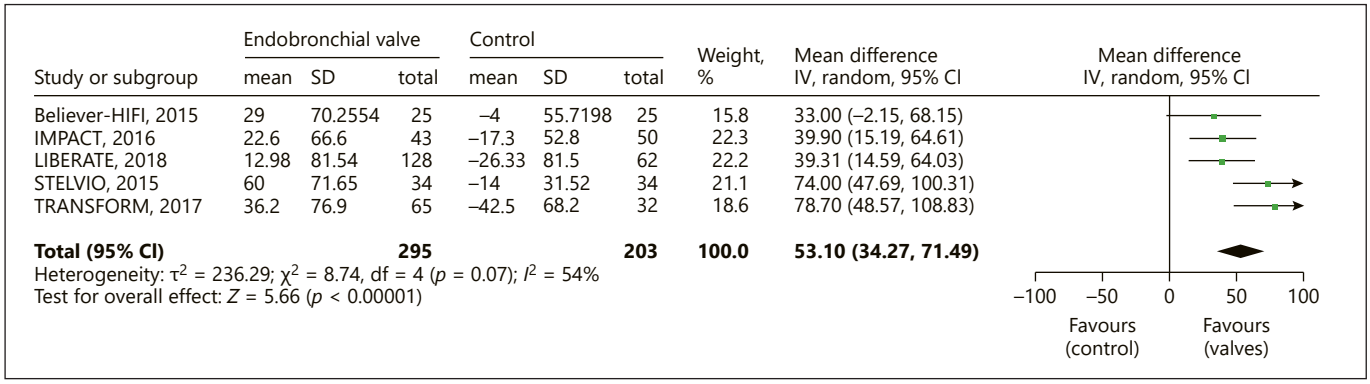

Fig. 6. Comparison 4. Change in 6-min walking test (in meters) after intervention.

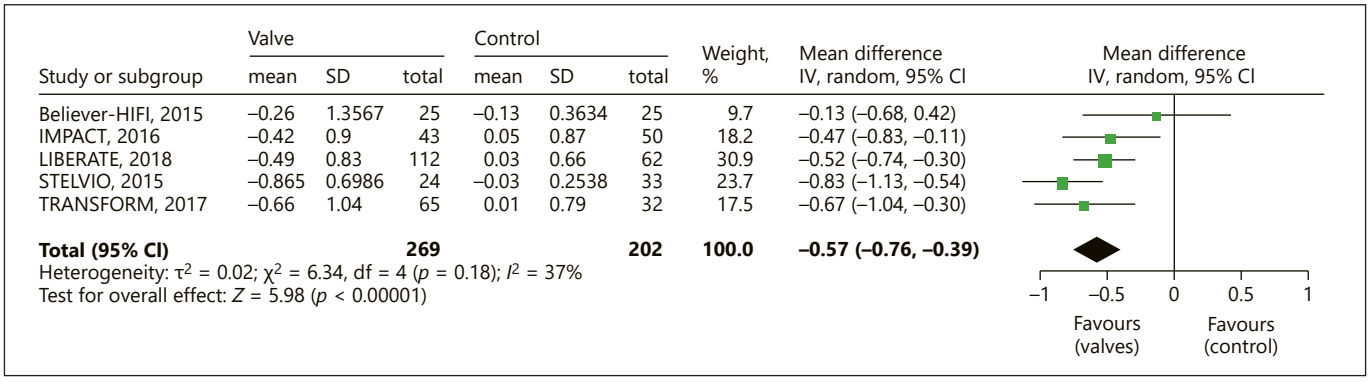

Fig. 7. Change in residual volume (in mL) after intervention.

Table 2. Subgroup analysis for major outcomes

Outcome	Emphysema distribution			Follow-up			Comparator		
	homogeneous	heterogeneous	residual I^2	<6 months	6–12 months	residual I^2	sham	SoC	residual I^2
FEV_1	16.27 (8.78, 23.76)	25.98 (17.72, 34.24)	55%	22.82 (14.26, 31.38)	17.89 (11.51, 24.27)	25%	20.9 (4.70, 37.09)	20.67 (14.7, 24.65)	25%*
I^2	0%	58%		48%	0%		na	43%	
SGRQ	–10.07 (–13.89, –6.24)	–7.42 (–10.57, –4.28)	8.60%	–8.0 (–11.08, –4.92)	–9.14 (–13.16, –5.11)	0%	–4.97 (–14.23, 4.29)	–8.68 (–11.21, –6.14)	0%
I^2	0%	25%		0%	64%		na	19%	
6MWD	50.51 (23.07, 77.95)	56.63 (23.22, 90.05)	0%	50.73 (23.5, 77.9)	56.35 (22.36, 90.34)	27%	33 (–2.14, 68.14)	56.92 (36.29, 77.55)	83%*
I^2	60%	70%		60%	71%		na	59%	
RV	–0.58 (–0.85, –0.32)	–0.66 (–1.02, –0.31)	52%	–0.53 (–0.76, –0.29)	–0.66 (–0.97, –0.35)	64%	–0.37 (–0.92, 0.18)	–0.61 (–0.78, –0.45)	63.9%*
I^2	0%	57%		0%	64%		na	15%	
Pneumo-thorax	5.69 (2.56, 12.69)	5.84 (2.96, 11.52)	0%	5.42 (2.75, 10.67)	7.29 (3.29, 16.15)	0%	2.17 (0.42, 11.16)	6.83 (3.92, 11.9)	40%
I^2	0%	5%		0%	0%		na	0%	

Values are given as mean (95% CI). SoC, standard of care; FEV_1, forced expiratory volume in 1 s; RV, residual volume; SGRQ, St George's Respiratory Questionnaire; 6MWD, 6-min walking distance; na, not applicable. * Statistically significant.

Table 3. Summary of the findings

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect	Participants (studies)	Certainty of the evidence (GRADE)
	risk with medical therapy	risk with EBV			
Change in FEV_1 (%)	16.77	22.74 (15.68-25.79)#	–	498 (5 RCTs)	⊕⊕⊕◯ moderate[a]
Change in SGRQ, points (total score)					
Scale: –10 to 10	8.42	8.47 (10.86–5.97)#	–	498 (5 RCTs)	⊕⊕⊕⊕ high
Change in 6MWT, m	40.51	53.1 (34.72–71.49)#	–	498 (5 RCTs)	⊕⊕◯◯ low[a–c]
All-cause mortality (mortality)	1 per 100	1 per 100 (0–2)	RR 1.26 (0.50–3.15)	498 (5 RCTs)	⊕⊕◯◯ low[a, c, d]
Risk of pneumothorax (pneumoTx)	4 per 100	23 per 100 (14–39)	RR 6.32 (3.74–10.67)	498 (5 RCTs)	⊕⊕⊕⊕ high

Follow-up: range from 3 to 12 months for all outcomes. EBV, endobronchial valve. FEV_1, forced expiratory volume in 1 s; SGRQ, St George's Respiratory Questionnaire; 6MWT, 6-min walking test; RR, relative risk; RCTs, randomized controlled trials. * Confidence interval. # Mean change. [a] Risk of bias regarding blinding of participants and personnel in most studies. [b] High residual heterogeneity between studies despite subgroup analysis. [c] Non-principal outcome. [d] Wide confidence interval with potential adverse effect.

References

1 Labarca G, Uribe JP, Pacheco C, Folch E, Kheir F, Majid A, et al. Bronchoscopic Lung Volume Reduction with Endobronchial Zephyr Valves for Severe Emphysema: A Systematic Review and Meta-Analysis. Respiration. 2019;98(3):268–78.

2 Davey C, Zoumot Z, Jordan S, McNulty WH, Carr DH, Hind MD, et al. Bronchoscopic lung volume reduction with endobronchial valves for patients with heterogeneous emphysema and intact interlobar fissures (the BeLieVeR-HIFi study): a randomised controlled trial. Lancet. 2015 Sep;386(9998):1066–73.