Author's reply: Lung volume reduction for emphysema

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Lung volume reduction for emphysema

Authors' reply

We thank our colleagues Daniel Franzen and Walter Weder for their interest in our review on lung volume reduction for emphysema, and for sharing their passionate views regarding the role of surgery in treating the disorder.[1] We share their enthusiasm for the surgical approach. However, since the publication of the National Emphysema Treatment Trial (NETT), there has been no substantial research or publications that have encouraged the referral of patients with emphysema for lung volume reduction surgery (LVRS) worldwide.[2] First, the number of surgical lung volume reduction procedures has declined—for example, in the USA, there were 93 LVRS procedures done in 2011, 65 in 2012, and 42 in 2013.[3] Although new surgical techniques have been developed, such as unilateral lobe resection by video-assisted thoracoscopic surgery and non-resection techniques, there has been a scarcity of controlled trials showing their efficacy and superior safety.[4,5] Franzen and Weder claim excellent safety results in their centre, which we acknowledge, but these results need to be reproduced in multicentre controlled studies to convince the broader medical community and to show that the NETT safety profile is indeed outdated.

Franzen and Weder correctly raise the issue of limited long-term data available for BLVR for emphysema. Some ongoing randomised trials are designed to prospectively follow up these patients for 5 years (eg, ClinicalTrials.gov NCT01608490 and NCT01796392). There are already single-centre long-term data published that suggest persistence of benefit and safety for BLVR.[6-8] We agree that a trial that randomly assigns patients to LVRS or to endobronchial lung volume reduction is needed. Such a trial is currently being done in the UK (CELEB trial, ISRCTN19684749)

We believe that the increase in number of BLVRs at our centres has led to increases in referral rates and in the number of surgical procedures. This observation should stimulate enthusiasm among members of the surgical community to revive the surgical methods with a rigorous scientific approach. We envision a future where lung volume reduction via endobronchial techniques and surgery co-exist. Surgery should be the treatment of choice in patients with emphysema when endoscopy is not an option, when endobronchial techniques fail to induce substantial benefit, and in those with predominant paraseptal emphysema. Surgery also has a role in patients in whom endobronchial valves show initial success but whose treatment is mitigated by valve displacement or by local complications such as chronic cough, development of granulation tissue, or distal pneumonia.

Another suggestion made by Franzen and Weder is to concentrate endobronchial lung volume reduction in expert centres. Again, we fully support them and although randomised data to support this statement are not available, we agree with them on the basis of earlier published expert statements.[9]

In conclusion, lung volume reduction can benefit patients with COPD. We are supportive of this treatment method, but if the surgical community is to convince the broader respiratory community, they need to do more trials and publish new evidence that allows us to move forward.

PLS, DJS, and FJH have been investigators in trials of endobronchial valves, coils, thermal ablation, aeriseal, and the airway bypass procedure. GD has been an investigator in a trial of endobronchial valves and coils. The institutions of FJH, GD, DJS, and PLS have been reimbursed for trial expenses by the respective device manufacturers. PLS and FJH have consulted for Broncus, CSA Medical, Medtronic, Holaira, Olympus, PneumRx/BTG, and Pulmonx. DJS has consulted for CSA Medical, Holaira, PneumRx/BTG, and Pulmonx. GD has consulted for PneumRx/BTG. WHvG declares no competing interests.

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