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JOURNAL ROUND-UP

Lung volume reduction surgery vs medical therapy for severe emphysema

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Naunheim KS *et al*. Long-term follow-up of patients receiving lung volume reduction surgery versus medical therapy for severe emphysema, by the National Emphysema Treatment Trial Research Group. *Ann Thorac Surg* 2006;82:431-443.

The National Emphysema Treatment Trial defined subgroups of patients with severe emphysema in whom lung volume reduction surgery (LVRS) improved survival and function at two years. 1218 patients were randomised to receive either LVRS or medical management for their severe emphysema. This extension study provides follow-up data on these patients for at least a further two years after the initial trial.

Overall, the 5-year risk ratio (RR) for death was 0.86 (p= 0.02) in the LVRS group as compared to medical therapy. Maximal exercise was better through three years and health-related quality of life (as assessed by the SGRQ) was better through four years in the LVRS group overall.

Analysis of data for the four subgroups showed that the differences between them remained. The upper lobe patients with low exercise capacity demonstrated better survival at five years (p=0.003), better maximal exercise through three years (p<0.001) and less symptoms through five years (p=0.01 at five years). Lower lobe predominant disease showed poorer survival compared to upper lobe disease. Upper lobe disease with high exercise tolerance did not show a survival benefit, but did show an improved exercise capacity (p<0.01, years 1 to 3) and health-related quality of life (p<0.01, years 1 to 4).

Conclusions: The beneficial effects of LVRS lasted beyond the two years of the first trial to almost five years. LVRS can be recommended for upper lobe-predominant emphysema patients with low exercise capacity because it gives a symptom and survival advantage. In those with upper lobe emphysema and high exercise capacity, LVRS will not confer a survival advantage, but may help symptoms.

Comment

This is an interesting study giving follow-up data from the initial national emphysema trial. It shows us that we should remember about LVRS as a treatment for emphysema in the right subset of patients – i.e. patients with large upper lobe bullae who are disabled because of poor exercise capacity. The surgical techniques are being revised and now include an endobronchial approach, which may make future results of LVRS even more favorable. Surgical treatment and even partial cure for severe emphysema is a real option in some patients.

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Effects of tiotropium combined with either salmeterol or salmeterol/fluticasone in moderate to severe COPD

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Aaron SD *et al*. Tiotropium in combination with placebo, salmeterol, or fluticasone–salmeterol for treatment of chronic obstructive pulmonary disease: a randomized trial. *Ann Intern Med* 2007;146(8):545-55.

This randomised double-blind placebo-controlled study ran from October 2003 until January 2006 in 27 centres across Canada and involved 449 patients with moderate or severe COPD. The intervention was one year of tiotropium with either placebo, salmeterol 25 mcg two puffs twice-daily, or fluticasone/salmeterol 250/25 two puffs twice-daily. The objective was to determine whether combining tiotropium with salmeterol or fluticasone/salmeterol improves clinical outcomes in adults with moderate to severe COPD compared with tiotropium alone.

Eligible patients had to have had at least one exacerbation of COPD requiring treatment with systemic steroids or antibiotics within the 12 months before randomisation. Additional inclusion criteria were: age older than 35 years; a history of 10 pack-years or more of cigarette smoking; and documented chronic airflow obstruction with an FEV_1/FVC ratio less than 0.70 and a post-bronchodilator FEV_1 less than