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SALVAGE LUNG VOLUME REDUCTION SURGERY AFTER FAILURE OR COMPLICATIONS OF ENDOBRONCHIAL TREATMENT WITH ONE-WAY VALVES FOR SEVERE EMPHYSEMA

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10.1136/thoraxjnl-2016-209333.206

Introduction Endobronchial lung volume reduction with one-way valves (ELVR), in combination with staged unilateral VATS lung volume reduction surgery (LVRS), multiplies the options of treatment for emphysema. No experience has yet been reported in literature of the use of LVRS after failure of ELVR. We aimed therefore to review our current series.

Methods 7 consecutive patients (3 male, age 68, 59–76) had successful Chartist assessment and ELVR, and subsequently underwent salvage LVRS following failure or complications of primary procedure. All patients were suitable candidates for either approach according to our criteria (average RV/TLC 67 range 56–77, FEV1 32% range 25–38, DLCO 32%, range 24–55), with 4 patients classifying as moderate to high risk for LVRS and the rest as moderate or low. They were offered both options and opted for ELVR on the assumption of reduced risks and shorter hospitalisation. Valves were not removed prior to LVRS, except in one case who was also the first chronological patient in our series.

Results Delayed collateral ventilation with no lobar collapse and no functional improvement at any time was observed in 3 patients. The remainder had lobar collapse with initial improvement: of these, 1 developed ipsilateral pneumothorax with persisting air leak leading to LVRS, 2 developed contralateral upper lobe compensatory hyperinflation (1R, 1L) and 1 ipsilateral lower lobe compensatory hyperinflation.

No significant morbidity or 30-day/in-hospital mortality. Median length of stay after LVRS was 11 days (4–34), slightly longer (19 days, 4–34) for patients who were operated for contralateral hyperinflation or whose EBV was removed prior to

VATS (no valve in situ on the operated side). Duration of drainage was also longer in these patients compared to the whole group, 18 (6–30) vs. 8 (5–30) days. Average EQ-5D score was 49.7 (18.9–71) six months after LVRS, vs. 42 (18.9–81.4) preoperatively, with only one patient reporting further deterioration.

Conclusion ELVR can be considered as a trial of LVR not precluding salvage LVRS. Removal of endobronchial valves prior to surgery seems unnecessary and may actually be protective against excessive postoperative air leak. Occurrence of compensatory hyperinflation may suggest that single-stage bilateral ELVR could also be considered.

Sleep Apnoea and Non-invasive Ventilation

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MULTIPLE DIMENSIONS OF EXCESSIVE DAYTIME SLEEPINESS

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10.1136/thoraxjnl-2016-209333.207

Introduction Sleepiness is a subjective symptom, often reported by patients with sleep disorders. We investigated subjective measures of sleepiness, as measured by the Epworth Sleepiness Scale (ESS), and correlated this to objective observations, as recorded by the mean sleep latency (MSL). We related our findings to affect, fatigue, emotion, mood, and quality of life.

Patients and methods Patients referred to a tertiary referral centre for sleep disorders were assessed regarding their sleep complaint, excessive daytime sleepiness (EDS), sleep routine and night-time symptoms. Age, gender and BMI were recorded. The ESS (0–24 points), the Stanford Sleepiness Scale (SSS; 0–8 points), the Samn-Perrelli fatigue scale (SPS; 0–7 points), the Global Vigour and Affect Scale (GVS and GAS 0–10 points, respectively), the Hospital Anxiety and Depression Scale (HADS-A and HADS-D 0–21 points, respectively), and the Positive and Negative Affect Schedule (PAS and NAS 10–50 points,

Abstract P63 Figure 1

respectively) were recorded. Patients underwent polysomnography (PSG) and multiple sleep latency tests (MSLT).

Results 9 patients (5 male/4 female, age 44.1 (14.6) years, BMI 30.5 (6.7) kg/m²; obstructive sleep apnoea (OSA, n = 4), narcolepsy (n = 2), idiopathic hypersomnia (n = 1), insomnia (n = 1), no sleep disorder (n = 1)) were studied. The PSG results showed a short total sleep time (TST 360.1 (69.7) min) with a slightly reduced sleep efficiency (SE 79.6 (11.4)%), there were no relevant periodic limb movements (PLM index 7.3 (4.3)/h) but mild-moderate OSA (apnoea-hypopnoea index (AHI) median 6.4 (interquartile range 0.2–30.5)/h). The ESS was 13.9 (7.2) points, the MSL was 7.6 (5.9) min, the SSS was 3.0 (1.3) points and the SPS was 4.0 (1.3) points. The GVS was 5.6 (2.2) points and the GAS was 4.8 (1.6) points, the HADS-A was 8.7 (6.2) points and the HADS-D was 8.9 (5.9) points, the PAS was 23.9 (10.7) and the NAS was 25.6 (8.0) points. There was a positive correlation between the ESS and the SPS, but no other significant correlations (Table 1).

Abstract P64 Table 1 Spearman's rho correlation coefficients

	ESS	MSL
MSL	$r = 0.086 / p = 0.872$	–
SSS	$r = -0.980 / p = 0.802$	$r = 0.000 / p = 1.000$
SPS	$r = 0.675 / p = 0.045^*$	$r = -0.088 / p = 0.868$
GVS	$r = 0.160 / p = 0.682$	$r = 0.200 / p = 0.704$
GAS	$r = 0.370 / p = 0.327$	$r = 0.860 / p = 0.872$
HADS-A	$r = 0.479 / p = 0.192$	$r = -0.600 / p = 0.208$
HADS-D	$r = 0.207 / p = 0.594$	$r = 0.086 / p = 0.872$
PAS	$r = 0.172 / p = 0.658$	$r = 0.257 / p = 0.623$
NAS	$r = 0.768 / p = 0.160$	$r = -0.600 / p = 0.208$

* $p < 0.05$.

Conclusion The ESS and the MSL did not correlate well, nor did they relate to measures of affect, emotion, mood, or quality of life. Conversely, there was an interaction between measures of fatigue and the ESS. These findings emphasise the need to develop better scores to characterise EDS, other than the ESS.

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OSAS AND DRIVING – BTS RETURN SURVEY TO ASSESS CONSISTENCY OF ADVICE GIVEN TO PATIENTS AT DIAGNOSIS AND AFTER TREATMENT– A REPEAT OF THE 2013 SURVEY TO EVALUATE THE IMPACT OF A BTS STATEMENT AND NEW DVLA REGULATIONS

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10.1136/thoraxjnl-2016-209333.208

Introduction In 2013 a BTS survey showed substantial variability in the advice that patients with obstructive sleep apnoea syndrome (OSAS) would be likely to receive from clinicians with regard to whether they were fit to drive or not. Since then the BTS has issued guidance and the DVLA changed its emphasis to sleepiness “likely to impair safe driving”, rather than sleepiness in general. The survey was divided into two parts, the first focusing on patients at presentation and the second after treatment, with the wording of the questions reflecting that used in the DVLA forms. We repeated this study in 2016 to assess whether these changes had resulted in greater consistency. Additional questions about BTS and DVLA guidance were included.

Methods Web based survey of members of BTS, BSS and ARTP.

Results 304 respondents. The vignettes at diagnosis are directly comparable between the surveys and the results are very similar ($p = \text{NS}$). In the most contentious case there remains an approximately 50:50 chance of a patient receiving opposing advice.

Abstract P65 Figure 1