the patient admitted to any problems at all while driving ($P=0.0098$, OR-1.6). Males were more likely to allow OSAS patients to drive. Consultants without an interest in sleep medicine and respondents seeing less than 5 patients per month were more likely to advise against driving. The advice given was not related to the age of the clinician.

Conclusions This survey has shown that there is considerable variability in the advice given by clinicians, with in some situations a patient having an even chance of receiving opposite advice, depending on who they see. Restriction of driving has major implications for an individual, both social and financial. Allowing someone to drive who is not safe to do so has potentially disastrous consequences for them and others. The issue of how to improve consistency of advice needs to be addressed.

Non-invasive markers of lung disease in children

S6 LONG TERM LUNG FUNCTION OUTCOMES IN CHILDREN BORN WITH ABDOMINAL WALL DEFECTS

¹S Rajalingam, ²Q Mok, ²J Curry, ³Eaton, ²E Fettes, ³J Kirkby, ²P Aurora; ¹Newcastle University, Newcastle, United Kingdom; ²Great Ormond St Children's Hospital, London, United Kingdom; ³Institute of Child Health, University College London, London, United Kingdom

10.1136/thoraxjnl-2013-204457.12

Introduction Although survival following surgical repair of abdominal wall defect is now good, there are very few data regarding long-term lung function (LF) outcomes. The aim of this study was to describe LF at school-age for a post-surgery population from a single large centre.

Methods All children having surgical repair of exomphalos or gastroschisis between 1/1/1998–30/6/2007 at our institution were identified, and those aged greater than 6 years were recalled for LF testing. Children born with major associated cardiac, genetic or laryngeal conditions were excluded from the study. All children underwent resting oximetry, body plethysmography, forced spirometry and carbon monoxide transfer test. Clinical and demographic data was also collected.

Results were converted to z-scores to adjust for height, sex, age and ethnicity. Statistical comparisons between groups were performed with t-tests.

Results 86 children were approached and LF data were obtained in 31 (12 Exomphalos; 19 Gastroschisis) children aged ≥ 6 years. 22 children were male; the mean age at testing was 9.9 years (range: 6.4–14.4). When analysed as a group these children had significantly reduced forced expiratory volumes in 1s, FEV_1 (-0.52 z-scores [95%CI -1.01, -0.04] $p = 0.036$), FEV_1/FVC (-0.88 [-1.21, -0.56] $p < 0.000$), lung transfer factor, TL_{CO} (-0.76 [-1.05, -0.47] $p < 0.000$), TL_{CO}/VA (-1.77 [-2.08, -1.46] $p < 0.000$), functional residual capacity, FRC (-0.45 [-0.70, -0.19] $p = 0.001$), residual volume, RV (-0.36 [-0.61, -0.12] $p = 0.006$) and significantly increased alveolar volume, VA (0.95 [0.37, 1.53] $p = 0.002$). Forced vital capacity, FVC was normal (-0.01 [-0.54, 0.51] $p = 0.96$).

When analysed as subgroups, children post exomphalos repair had significantly lower LF than those post gastroschisis repair, with a mean difference (95% CI of difference [Exomphalos–Gastroschisis]) in FEV_1 of -1.52 z-scores (-2.35, -0.68; $p = 0.001$); FVC -1.54 (-2.47, -0.62; $p = 0.002$); TLC -0.91 (-1.78, -0.04; $p = 0.041$). No significant group differences were found in the remaining lung function outcomes.

Conclusions This is the largest study to report lung function at school-age in children post abdominal wall surgery. We demonstrate that these children have significantly reduced lung function; and when analysed by subgroup, that those with a history of exomphalos repair have significantly greater defect than those with a history of gastroschisis repair.

Comparison of Forced Expiratory Volumes in 1 second

Comparison of Forced Vital Capacity

Comparison of Total Lung Capacity

Abstract S6 Figure 1. Comparison of lung function outcomes between groups. Spirometry and plethysmography z-scores derived from Global Lung Function Initiative 2012 and Rosenthal 1993 equations respectively.

S7 EVOLUTION OF LUNG FUNCTION DURING THE FIRST TWO YEARS OF LIFE IN INFANTS WITH CYSTIC FIBROSIS DIAGNOSED BY NEWBORN SCREENING

¹L C Brennan, ¹L P Thia, ¹A Hoo, ¹T Nguyen, ¹J Chudleigh, ¹S Lum, ²A Wade, ³C Wallis, ⁴A Bush, ⁴I Balfour-Lynn, ⁵H Wyatt, ⁴S Carr, ¹J Stocks; ¹Portex Respiratory Unit, UCL