Journal club

Robert Chapman

PRIMARY SPONTANEOUS PNEUMOTHORAX: DOING NOTHING MAY BE THE RIGHT THING TO DO

The current recommended management of an uncomplicated, primary pneumothorax is for initial aspiration and then chest drain insertion; however, many may resolve spontaneously. The primary spontaneous pneumothorax (PSP) trial (*N Eng J Med* 2020;382:405) was a multicentre, randomised, non-inferiority trial that assessed immediate intervention (chest drain insertion) versus a conservative observational approach in the management of PSP. The primary outcome was lung re-expansion within 8 weeks. Of 2367 patients assessed, 316 predominantly young, thin males were randomised; 131 in the intervention group and 125 in the conservative group were analysed for the primary outcome. A total of 98.5% of patients in the intervention and 94.4% within the conservative group demonstrated radiological resolution at 8 weeks. The calculated risk difference was −4.1% (95% CI −8.6 to 0.5, p=0.02). More adverse events occurred in the intervention group (49/154 compared with 16/162). Conservative management resulted in fewer days spent in hospital (mean length of stay 1.6±3.5 days; 6.1±7.6 days in the intervention group). Both groups had high rates of symptom resolution at 8 weeks (intervention 93.4%; conservative 94.6%). While these results provide some reassurance regarding the use of a conservative approach in the management of PSP, there needs to be some caution when interpreting the results when fewer than 15% of patients were recruited and a detailed breakdown of numbers of patients excluded by criteria is not available.

EARLY PULMONARY REHABILITATION AFTER EXACERBATIONS OF COPD: IT IS BETTER IF YOU TURN UP…

Pulmonary rehabilitation is an essential part of the management of patients with symptomatic COPD and reduces readmission risk if delivered following an exacerbation, yet rates of attendance and completion are low. The COPD-EXA-REHAB study compared early pulmonary rehabilitation (within 2 weeks of hospital discharge) with standard pulmonary rehabilitation initiated within 2 months. Kjaergaard *et al* (*BMJ Open Respir Res*. 2020;7(1):e000582) conducted an exploratory analysis on those patients randomised to early pulmonary rehab (n=70), with a primary aim of assessing the relationship between attendance and 12-month readmissions. Improved attendance reduced subsequent readmission risk over 12 months (incidence rate ratio 0.93, 95% CI 0.88 to 0.99, p=0.02), equivalent to a 7% reduction with each session attended. Similarly, increased attendance was associated with improved walk test distance but not improved quality of life. The small sample size and study design means that a causal effect cannot be concluded from these data alone. These findings while exploratory highlight the need to develop strategies to improve patient engagement in pulmonary rehabilitation.

SOLRIAMFETOL IN OSA: NOT JUST LESS SLEEPY BUT HAPPIER AND MORE PRODUCTIVE

Excessive daytime sleepiness (EDS) is common in patients with obstructive sleep apnoea (OSA) and can persist despite treatment with CPAP (continuous positive airway pressure). Solriamfetol has been approved to improve wakefulness in patients with EDS secondary to OSA but little is known about the subsequent impact on quality of life and productivity. Weaver *et al* (*Ann Am Thorac Soc*. 2020;17:998) report the secondary outcomes of quality of life (Functional Outcomes of Sleep Questionnaire; FOSQ-10) and productivity (Work Productivity and Activity Impairment Questionnaire: Specific Health Problem; WPAI:SHP) from a 12-week, placebo-controlled, phase 3 safety and efficacy trial of solriamfetol versus placebo in OSA patients with EDS. The trial randomised 476 participants 1:1:2:2:2 to receive solriamfetol 35.5 mg, 75 mg, 150 mg or 300 mg or placebo, respectively. All patients had already been initiated on a primary OSA therapy prior to randomisation with the majority adherent to treatment (~70%). Results demonstrated the dose-dependent effect, up to 150 mg, of solriamfetol in improving daily functioning and work productivity. Notably, at a dose of 150 mg of solriamfetol daily, the least squares mean change from baseline to week 12 with regard to the FOSQ-10 outcome was 3.0 (minimally important difference range 1.7–2.0). However, treatment-emergent adverse events (TEAEs) were experienced by 67.9% of participants across all solriamfetol doses, compared with 47.9% in the placebo group. The most frequent TEAEs were headache, nausea and decreased appetite. Withdrawal due to an adverse event was twice as common on active treatment compared with placebo (7.0% vs 3.4%), with the highest withdrawal rate occurring in the 300 mg group (12.7%). The reported outcomes suggest potential improvements for patients with OSA beyond combating residual EDS with solriamfetol, but the side-effect profile needs to be evaluated further.

ANTIFIBROTIC THERAPY IN IPF: REAL-WORLD DATA SUPPORT SURVIVAL ADVANTAGE

Idiopathic pulmonary fibrosis (IPF) treatment has been transformed by the advent of the antifibrotic drugs, pirfenidone and nintedanib. While the efficacy of both drugs has been demonstrated in selected trial populations, there is a lack of data in the more heterogeneous 'real world' of clinical practice. The INSIGHTS-IPF registry is a Germany-wide, investigator-led observational study based over multiple centres with a continuous enrolment of patients with IPF. Behr *et al* (*Eur Respir J* 2020: DOI:10.1183/13993003.02279–2019) analysed 588 patients from the INSIGHTS-IPF registry. Assessment was completed at enrolment and then at 6–12 month intervals. A propensity score was used to mitigate differences in baseline characteristics. The principal objectives were to assess the impact of antifibrotic therapy on survival and lung function measurements. Results showed an overall 1-year survival rate of 87% with antifibrotics versus 46% without antifibrotics; the 2-year survival rate was 62% with therapy versus 21% without. Interestingly, not only was FVC and DLco (diffusing capacity for carbon monoxide) relatively stable over follow-up irrespective of antifibrotic therapy but also there was no difference in mortality in patients with stable (≤10%) or rapid (>10%) annual FVC decline (HR 1.34, 95% CI 0.89 to 2.02, p=0.163). Antifibrotic therapy significantly increases survival in patients with IPF, but lung function stability should not be interpreted as indicating clinical stability and as such low risk of death.

Department of Medicine, University College London Hospitals NHS Foundation Trust, London, UK

Correspondence to Dr Robert Chapman, University College London Hospitals NHS Foundation Trust, London NW1 2BU, UK; robert.chapman2@nhs.net

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Not required.

Provenance and peer review Commissioned; internally peer reviewed.

Data availability statement No data are available

To cite Chapman R. *Thorax* 2021;**76**:104.

Thorax 2021;**76**:104.
doi:10.1136/thoraxjnl-2020-216601