Journal club

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CLINICAL MANAGEMENT OF PNEUMOTHORACES IN THE UK: SIGNIFICANT VARIATION IN PRACTICE AND DEVIATION FROM GUIDELINES

Spontaneous pneumothoraces are a common pathology with recent clinical trial data not yet incorporated into published guidance, leading to potential variable approach by physicians in the management of this condition. Hallifax and colleagues (Respir Res 2022;23:23) undertook the first national survey of clinical management of pneumothoraces across the UK to document current practice in the context of published guidance and more recent clinical trials. Of 103 respondents, it was seen that for initial management, only 50.5% would manage a primary pneumothorax without symptoms conservatively dropping to 2.9% if the patients has ongoing symptoms. For secondary pneumothoraces, 62.7% would insert a drain with minimal symptoms and this rises to 95.1% if the patient presents with symptoms. Ambulatory pathways were only an option for 28.2% of participants. Methods of clarifying if there was cessation of the air leak varied between observing a 'lack of bubbling' on coughing (35.3%), digital suction devices (13.7%) or by clamping and reimaging for accumulation of pneumothorax (18.6%). There was a similarly wide range of practice regarding clamping, use of suction and post-chest drain removal imaging. The authors highlight recent evidence around the benefits of conservative and ambulatory management that is not reflected in the current published guidelines, leading to significant variation in practice. There is urgent need for consensus on the optimum strategy in management of these patients and updated treatment guidelines.

COADMINISTERING COVID-19 AND SEASONAL INFLUENZA VACCINES: SAFE WITH RETAINED EFFICACY

The global COVID-19 vaccination programme continues, overlapping with the timing of the seasonal influenza vaccination programme. However, there were no data for the safety of coadministration of the two vaccines until Toback *et al* (Lancet Respir Med 2022;10:167) conducted a substudy of the larger UK trial that assessed the safety and efficacy of the NVX-CoV2373 vaccine. Of the 15 139 participants in the NVX-CoV2373 trial, 431 were included in the subgroup analysis, 217 were covaccinated with the seasonal influenza vaccine plus NVX-CoV2373 while 214 received the influenza vaccine plus placebo. Safety analysis demonstrated that the frequency of 'adverse events' and 'severe adverse events' in the covaccinated group (18·4% and 0.5%) was similar to those in the initial NVX-CoV2373 study cohort (17.6% and 0.4%), respectively. Geometric mean titres of haemagglutination were used as a measure of immunogenicity and both showed no difference in day 21 inhibition between the influenza vaccine plus NVX-CoV2373 group and the influenza plus placebo group. When assessing efficacy of vaccine, it was calculated to be 87·5% effective (95% CI −0·2 to 98·4) compared with vaccine efficacy of 89·8% in the same age group from the main study. The study provides reassurance that coadministration of the COVID-19 and influenza vaccine is safe and does not meaningfully reduce vaccine efficacy, which will simplify future booster dose administration. The study calls for further work looking at paediatric and over 65 populations.

ENDOBRONCHIAL ULTRASOUND TRANSBRONCHIAL NEEDLE ASPIRATION FOR NEXT-GENERATION SEQUENCING: MORE PASSES PROVIDES HIGHER SUCCESS RATE

Next-generation sequencing (NGS) is preferred to direct sequencing given its sensitivity with low tumour cellularity and ability to identify variants from hundreds of genes in a single test allowing for targeted therapies to be initiated. Endobronchial ultrasound transbronchial needle aspiration (EBUS-TBNA) is the recommended modality to stage non-small cell lung cancer, but the performance for NGS is not certain. Zhao *et al* (Lung Cancer 2022;166:17) completed a meta-analysis of 21 studies reporting data from 1175 patients. They found that EBUS-TBNA was suitable in retrieving adequate samples for NGS and proportion of adequate samples for sequencing was 90.3%. Though the authors noted that with increasing number of passes there was an increase in the success of sampling they were not able to interpret this relationship to suggest an optimal number of passes. An important consideration regarding success depends on the amount of DNA required by molecular laboratories and the number of genes in the panel. However, seven studies (560 patients) reported pooled weight of DNA extracted from EBUS-TBNA samples at 868.7 ng (95% CI 446.3 ng to 1291.1 ng), and most NGS panels require a minimum of 50 ng. The review offers high-level evidence that shows EBUS-TBNA provides suitable samples for NGS and sampling success may be proportional to the number of passes.

POST-COVID-19 SYNDROME: NO ROLE FOR FENO MONITORING

Fractional exhaled nitric oxide (FeNO) has been proposed as a potential non-invasive biomarker for assessing of airway inflammation and oxidative stress in the lungs of patients recovering from COVID-19. With the increasing numbers of patients worldwide with post-COVID-19 syndromes Maniscalco *et al* (Respir Med 2022;193:106745) propose that FeNO may act as a biomarker for the severity of the prolonged inflammatory phase of the syndrome. Sixty-eight patients were assessed and compared with a group of 29 healthy volunteers. The mean FeNO for the post-COVID patients was 18.55 (95% CI 15.50 to 21.58) parts per billion (ppb) and in healthy volunteers was 17.46 (95% CI 15.75 to 19.17) and this difference was not statistically significant (p=0.053). Only two (3%) patients had FeNO levels of >50 ppb, a level viewed as indicating a degree of inflammation that would be responsive to corticosteroids. They also noted expected findings where patients who had received steroids during their COVID-19 illness had a significantly lower FeNO of 14.89 ppb (95% CI 10.90 to 18.89) compared with 20.80 ppb (95% CI 16.56 to 25.04) in those who did not (p=0.043). The authors acknowledge the small sample size of the study but the data presented do not indicate a potential role for FeNO as a biomarker in the severity assessment or monitoring of a post-COVID-19 syndrome.

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 applicable.

Ethics approval Not applicable.

Provenance and peer review Commissioned; internally peer reviewed.

To cite Omar A. *Thorax* 2022;**77**:738.

Thorax 2022;**77**:738.
doi:10.1136/thoraxjnl-2022-219263

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