CYCLOPHOSPHAMIDE FOR CONNECTIVE TISSUE DISEASE-ASSOCIATED INTERSTITIAL LUNG DISEASE (CTD-ILD)

Cyclophosphamide is the accepted standard of care for individuals with progressive CTD-ILD. Its efficacy and adverse effects in CTD-ILD has recently been published in a Cochrane review (Barnes et al. Cochrane Database Syst Rev 2018;1:CD010908). Four trials with 495 participants (mostly with systemic sclerosis) were included. When compared with placebo, there was a statistically significant but clinically small improvement in post cyclophosphamide FVC (% mean difference (MD) 2.83, 95% CI 0.80 to 4.87; p=0.006) but no difference in post cyclophosphamide DLCO (% MD −1.68, 95% CI −4.37 to 1.02; p=0.22, two trials, 182 participants). When comparing cyclophosphamide with mycophenolate mofetil (MMF) at 1 year (two trials, 149 participants), there was no significant difference in lung function (p=0.61) or diffusion capacity (p=0.76). Improvement in lung function was more pronounced in patients with worse baseline spirometry and fibrosis scores. As may be expected, there was a greater risk of side effects with cyclophosphamide when compared with both placebo and MMF, leading to higher dropout rates in the cyclophosphamide arm of many trials. One trial demonstrated improved quality of life index and reduced breathlessness (with cyclophosphamide compared with placebo), but there was no impact on mortality (when comparing cyclophosphamide with placebo and MMF). Limitations of this review are the small number of trials included, with varying degrees of disease severity. The outcomes of the RECITAL trial, a randomised controlled trial comparing rituximab to cyclophosphamide for the treatment of CTD-ILD, are awaited.

LONG-TERM OUTCOMES OF PATIENTS WITH ILD AND MIXED CONNECTIVE TISSUE DISEASE (MCTD)

MCTD is characterised by features of lupus, rheumatoid arthritis, polymyositis and systemic sclerosis with positive serology for antinuclear antibodies. A long-term observational Norwegian nationwide cohort study (Reiseter et al. Rheumatology (Oxford) 2018;57:255–62) assessed the extent and impact of ILD in 135 patients with MCTD. ILD was common at diagnosis (40%) but only infrequently developed thereafter. Twenty-three out of 49 patients showed progressive ILD. Predictors of progression, after multivariate Cox regression analysis, included elevated anti-RNP titre (HR=1.5, 95% CI 1.1 to 2; p=0.008), presence of anti-Ro/52 antibodies (HR=3.5, 95% CI 1.2 to 10.2; p=0.023) and male gender (HR=4.0, 95% CI 1.4 to 11.5; p=0.011). History of arthritis reduced the risk by 80% (95% CI 0.1 to 0.6; p=0.004). The study found that having ≥5% of total lung volume disease extent was associated with a threefold increased risk of death (HR=2.9, 95% CI 1.2 to 7.0; p=0.020). Although cause of death and association with ILD was not analysed in this study, it highlights the importance of screening for and diagnosing ILD in patients with MCTD.

PREVALENCE OF LUNG CANCER IN ILD AND COPD

Recent work has demonstrated a potential risk of fibroblast proliferation and infiltration in ILD mimicking malignant activity. This cross-sectional population-based study sought to determine the prevalence of lung malignancy in patients with ILD and compare this rate with patients with COPD (Jung et al. Medicine 2018;97:e0071). They identified cases of ILD from national South Korean medical insurance data using International Statistical Classification of Diseases, 10th Revision codes for data entered in 2011. They identified 859 patients with ILD and compared these with 15 949 patients with COPD. Patients with both ILD and COPD were excluded. The prevalence of lung cancer in the ILD and COPD cohorts was 7334 per 100 000 individuals and 4721 per 100 000 individuals, respectively (p<0.01). Despite the limitations of insurance data-based study and the lack of smoking status data, the significantly higher prevalence of lung cancer in ILD than in COPD demonstrates the need to be vigilant for lung cancer in patients with ILD.

MORTALITY AFTER ACUTE RESPIRATORY FAILURE IN ILD

Patients with ILD and acute respiratory failure are frequently treated within critical care, but clinicians have few tools to support decision making in this high-risk period. This retrospective cohort study sought to determine a prediction model for inhospital mortality in patients with ILD admitted to their intensive care unit with respiratory failure (Gannon et al. Chest 2018;153:1387–95). One hundred and twenty-six patients were included with ILD subtypes: IPF (12%), connective tissue-related ILD (18%), other ILD (29%) and unclassifiable ILD (41%). Inhospital mortality for the cohort was 66%. One-year mortality was 80%. CTD-ILD was independently associated with a lower risk of death than other ILD diagnostic groups. LASSO-penalised regression determined that male gender, IPF, raised body mass index, mechanical ventilation or extracorporeal membrane oxygenation and a raised Simplified Acute Physiology Score-II increase the risk for inhospital mortality. Using a predictive model to categorise patients as either low, moderate or high risk for inhospital mortality, the mortality rates corresponds as follows 33%, 65% and 96%. Although outcomes remain poor, this study provides support for clinical decision making to direct care towards aggressive critical care interventions or early involvement of palliative and end-of-life care.

Competing interests None declared.

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