ASSOCIATION BETWEEN STEROID THERAPY AND SURVIVAL

Kirstin Scott1, Clive Kelly1, Mohamed Nisar2, Subha Arthanari2, Felix Woodhead3, Alec Price-Forbes4, David Middleton5, Owen Dempsey6, Julie Dawson7, Nav Sathi7, Yasmeen Ahmad8, Gouri Koduri9 and Adam Young10

1Department of Rheumatology, Queen Elizabeth Hospital, Gateshead, 2Department of Rheumatology, Burton Hospital, Burton on Trent, 3Department of Chest Medicine, Coventry and Warwickshire Hospital, Coventry, 4Department of Rheumatology, Aberdeen Hospital, Aberdeen, 5Department of Rheumatology, St Helens Hospital, St Helens, 6Department of Rheumatology, North Wales Hospital, Betsy Coed, 7Department of Rheumatology, St Albans Hospital, St Albans, UK

Background: Clinically relevant interstitial lung disease (ILD) is present in approximately 5% of patients with RA. Traditionally, oral steroids have been used to treat this manifestation of RA, but no evidence base exists to support this. Indeed, concern has been raised that such an approach might be associated with increased mortality in ILD. We have examined the effect of oral steroid therapy on mortality in a large multi-centre group of patients retrospectively to assess the effect of these agents on survival.

Methods: For the purposes of this study, we collected data from seven centres across the UK on patients with both RA and ILD (proven on HRCT) identified over a 25 year period from 1987 to 2012 using a standard proforma. We analysed the age, duration of both RA and ILD, outcome and, where appropriate, cause of death. Equivalent data were obtained from a control group of RA patients from one centre without lung disease, matched for age, sex and disease duration. We recorded the number of patients with RA-ILD who had received oral prednisone therapy for 3 months or more. We used Chi squared tests to assess the significance of any differences in disease characteristics between those who had steroids and those who had not. We calculated relative risk (RR) of all cause and respiratory mortality in all patients with RA-ILD, and in those treated with steroids.

Results: A total of 260 patients were identified from across the UK with proven RA-ILD. Steroids had been used in 154 (59%) RA-ILD patients, but in only 36 (14%) controls, P = 0.01. There were no differences between RA-ILD patients on steroids and those not on steroids with regard to age, gender, disease duration and extent of ILD, smoking, serology and lung function. However, steroid treated patients were significantly more likely to have usual interstitial pneumonia (UIP), P = 0.02. The RR of death from any cause was significantly increased in steroid treated RA-ILD patients [1.65 (1.2–2.3)], P = 0.002, but was normal in those who had not received steroids [1.07 (0.7–1.6)]. The RR of respiratory death was more significantly increased in those who had been on steroids [2.75 (1.6–4.7)], P = 0.0002, than in those who had not received steroids [2.06 (1.1–3.8)], P = 0.02.

Conclusion: Patients with RA-ILD have increased mortality over controls, and over half have been treated with oral steroids. Steroid treated RA-ILD patients are at increased relative risk of death, especially from respiratory causes. The excess of UIP in the steroid treated group is likely to account for some of the excess mortality. This large retrospective multi-centre study suggests long term oral steroids should be avoided wherever possible in patients with RA-ILD, and reflects earlier findings in patients with ILD alone.

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