Background/Aims

Shielding measures were implemented within the United Kingdom in an attempt to slow the rate of COVID-19 infections, with shielding letters being sent to extremely vulnerable patients. This included rheumatology patients on immunosuppressive therapies sufficient to increase their risk of infection.

Table 1: COVID-19 Rheumatology admissions in MSE and BHR Trusts

|                          | Basildon | Southend | Mid Essex | BHR | Total |
|--------------------------|----------|----------|-----------|-----|-------|
| Number of Rheumatology shielding letters sent | 1000     | 2740     | 1174      | 962 | 5876  |
| Total number of COVID-19 admissions | 769      | 501      | 737       | 1688| 3695  |
| Shielded Rheumatology patients admitted with COVID-19 | 9        | 9        | 5         | 5   | 28    |
| Deaths | 3 | 3 | 1 | 3 | 10 |
| Mean age | 67.3 | 75.6 | 73.4 | 69.0 | 71.3 |
| Gender | Male | 3 | 5 | 2 | 1 | 11 |
|          | Female | 6 | 4 | 3 | 4 | 17 |
| Rheumatological diagnosis |            |            |            |     |       |
| Sjogren’s | 1 | 0 | 0 | 0 | 1 |
| Vasculitis | 1 | 3 | 0 | 0 | 4 |
| PRR | 0 | 1 | 0 | 1 | 2 |
| Reactive arthritis | 0 | 0 | 0 | 1 | 1 |
| Psoriatic arthritis | 2 | 0 | 1 | 0 | 3 |
| SLE | 0 | 0 | 0 | 1 | 1 |
| Systemic sclerosis | 1 | 0 | 0 | 0 | 1 |
| Dermatomyositis | 1 | 0 | 0 | 0 | 1 |
| Co-morbidities |            |            |            |     |       |
| Hypertension | 0 | 1 | 0 | 1 | 2 |
| Atrial fibrillation | 0 | 1 | 0 | 1 | 2 |
| Stroke/TIA | 0 | 1 | 0 | 0 | 1 |
| Ischaemic heart disease | 2 | 1 | 0 | 0 | 3 |
| Intestinal lung disease | 4 | 0 | 0 | 0 | 4 |
| Diabetes | 0 | 2 | 1 | 0 | 3 |
| Dementia | 0 | 1 | 0 | 0 | 1 |
| CVD | 2 | 2 | 1 | 1 | 15 |
| COPD | 2 | 2 | 0 | 0 | 4 |
| Cancer | 1 | 2 | 0 | 0 | 3 |
| Osteoarthritis | 2 | 0 | 0 | 1 | 3 |
| Ulcerative colitis | 0 | 1 | 0 | 0 | 1 |
| HIV | 0 | 0 | 0 | 1 | 1 |
| Treatment |            |            |            |     |       |
| Prednisolone | 3 | 3 | 0 | 3 | 9 |
| Methotrexate | 5 | 3 | 5 | 2 | 15 |
| Hydroxychloroquine | 3 | 0 | 0 | 2 | 5 |
| Adalimumab | 1 | 0 | 0 | 2 | 2 |
| Rituximab | 0 | 0 | 1 | 2 | 3 |
| Sulfasalazine | 3 | 0 | 1 | 1 | 5 |
| Leflunomide | 1 | 0 | 0 | 1 | 2 |
| Azathioprine | 0 | 1 | 0 | 0 | 1 |
| Baricitinib | 0 | 0 | 1 | 0 | 1 |

Table shows number of shielding letters and total COVID-19 admissions within the 2 Trusts, as well as the demographics, rheumatological diagnoses, co-morbidities and treatment of the shielded Rheumatology patients who were admitted with COVID-19.
Methods
This was a retrospective audit assessing the number of rheumatology patients within the Mid and South Essex NHS Foundation Trust (MSE Trust) and Barking, Havering and Redbridge University Trust (BHR Trust) who were sent shielding letters. We audited how effective these measures were in preventing COVID-19 infection during the shielding period (up to 1st July 2020). Risk criteria from NHS Digital and the British Society for Rheumatology (BSR) were used by individual departments within these Trusts to identify the relevant patients. We audited from case records demographic details, rheumatological diagnoses, therapies and associated co-morbidities in these patients.

Results
A total of 5,876 high risk patients within these Trusts were identified and sent shielding letters: 4,914 within the MSE Trust and 962 patients within the BHR Trust. As seen in Table 1, of these 5,876 patients, 26 (0.48%) were hospitalised with positive tests for COVID-19: 23 of the 4,914 (0.47%) in MSE Trust and 5 of the 962 (0.52%) in BHR Trust. Of the 28 COVID-19 admissions, 10 died (36%). The number of rheumatology patients that developed COVID-19 as a proportion of all patients admitted across these two Trusts was 0.76% (28 out of 3,690).

Conclusion
This audit supports the idea that shielding is an effective tool in protecting these vulnerable patients. Most of our patients admitted were elderly, had multiple co-morbidities and generally conformed with the known risk factors for severe COVID-19 illness. This supports Government guidelines and BSR risk scoring and is particularly important as it is becoming increasingly apparent that COVID-19 will be prevalent for a long time to come. In line with the recent EULAR COVID-19 registry report, only one of the hospitalised patients from these Trusts was on anti-TNF therapy, suggesting that these therapies were in fact protective. It raises the open question: whether immunosuppression may have a protective effect in some Rheumatology patients.

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