

the same months of the previous 5 years (see related abstract about influenza seasons). Unlike in the general population, sex-specific rates in RAIRD were similar in males and females. When comparing risk of death during COVID-19 to pre-COVID-19, people with RAIRD had an increased risk of death from age 35 upwards, compared to around age 55 upwards in the general population. As the protective effect of being female was not seen in RAIRD, the group at the largest increased risk compared to their pre-COVID-19 risk were women aged 35 upwards. The absolute risk of all-cause death for someone aged 20-29 with RAIRD was similar to someone in the general population aged >20 years older, someone aged 40-49 years with RAIRD similar to someone in the general population 20 years older, and someone aged 60-69 with RAIRD similar to someone in the general population aged >10 years older.

Conclusion

The excess risk of all-cause death during COVID-19 occurs at a younger age among people with RAIRD than among the general population, and particularly affects females. . We urgently need to quantify how much risk is due to COVID-19 infection and how much due to disruption to healthcare services to inform better guidance about shielding, access to healthcare and vaccine priorities for people with rare diseases.

Disclosure

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COVID-19 SCIENCE

P054 RISK OF DEATH DURING THE 2020 UK COVID-19 EPIDEMIC AMONG PEOPLE WITH RARE DISEASES COMPARED TO THE GENERAL POPULATION

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Background/Aims

To quantify the risk of death among people with rare autoimmune rheumatic diseases (RAIRD) during the UK 2020 COVID-19 epidemic compared with baseline risk and the risk of death in the general population during COVID-19.

Methods

A cohort study was performed using data from the National Congenital Anomaly and Rare Disease Registration Service (NCARDRS). Coded diagnoses for RAIRD were identified from Hospital Episode Statistics from 2003 onwards. Previous coding validation work demonstrated our case ascertainment methods had a positive predictive value >85%. ONS published data were used for general population mortality rates. The main outcome measure was age-standardised mortality rates (ASMRs) for all-cause death. Secondary outcome measures were age-sex standardised mortality rates, and age-stratified mortality rates.

Results

168,691 people with RAIRD were alive on 1 March 2020. Their median age was 61.7 (IQR 41.5-75.4) years, and 118,379 (70.2%) were female. 1,815 (1.1%) people with RAIRD died during March and April 2020. The ASMR among people with RAIRD was 3669.3 (95% CI 3500.4-3838.1) per 100,000 person-years, which was 1.44 (95% CI 1.42-1.45) times higher than the average ASMR during the same months of the previous 5 years. In the whole population of England, the ASMR during March and April 2020 was 1361.1 (1353.6- 1368.7) per 100,000 people, which was 1.38 times higher than the average ASMR during