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Age of people with Type 2 diabetes and the risk of dying following SARS-CoV-2 infection

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Abstract

Our analysis as described in this research letter highlights the fact that age outweighs many other factors in people with T2DM in relation to mortality from SARS-CoV-2 virus, once infected. This fact should be taken into account in relation to the vaccination programme against coronavirus-19 in people with T2DM in the UK and elsewhere.

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Letter to the Editor

In 2020 the whole world has been challenged by the SARS-CoV-2 virus (Coronavirus-19) (1). Following coronavirus-19 infection people with diabetes are at higher risk than those who do not have diabetes, of becoming very unwell and in some cases dying (2,3,4). Notably Barron et al (4) reported an odds ratio (OR) of 2.03 (95% CI 1.97-2.09) for in-hospital coronavirus-19 related death in people with type 2 diabetes (T2DM). A body of work is emerging which is beginning to explain why people with diabetes are more likely to become seriously unwell following a coronavirus-19 infection. However much of the detail remains to be determined (3).

For people with diabetes 2020 has been a very difficult year, with the awareness that their condition puts them at an increased risk of becoming very seriously unwell/dying following coronavirus-19 infection. It is therefore critical to determine all the factors that put any person with diabetes at an increased risk of a serious outcome after contracting a coronavirus-19 infection.

In one area of the UK (Salford) over the period of March-October 2020, we examined the potential risk factors relating to mortality in people with T2DM, who were confirmed as being coronavirus-19 positive. We examined health records for a representative sample of 308 T2DM people who were confirmed to be infected with the coronavirus-19. Of these 56 people died, with the peak mortality rates seen in the months of April/May 2020.

Overall deaths for T2DM individuals living in Salford were 100% higher in March, 220% higher in April and 34% higher in May 2020 compared with the previous 5 year average monthly mortality rates for people with T2DM. Those who died following a confirmed coronavirus-19 infection were significantly older than those who survived (age±95% confidence Interval (CI)) at 82.8±10.3 vs 70.7±14.8 years ($p<0.001$). In logistic regression analysis, only age (Odds ratio (OR) (95% CI)) 1.07 (1.02-1.12) was predictive of death following coronavirus-19 infection, independent of gender, glycosylated haemoglobin (HbA1c), diastolic blood pressure, body mass index, serum creatinine, serum cholesterol, smoking status, and urine albumin/creatinine ratio. We were not able to include ethnicity in the analysis, as the sample included only a small number of people of non-Caucasian ethnic origin

This analysis highlights the fact that age outweighs many other factors in people with T2DM in relation to mortality from the coronavirus-19 once infected. This fact should be taken into account in relation to the vaccination programme against the coronavirus-19 in people with T2DM in the UK and elsewhere, while emphasising as always, support for concordance with lifestyle and pharmacological management in order to optimise the health of the individual.

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None

Conflict of Interest

None of the co-authors has any conflict of interest

Data sources

The data used in the analyses presented was obtained with the permission of the Salford Integrated Record (SIR) board and was fully anonymised prior to being made available to the investigators.

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