Diabetes almost doubles risk of death from COVID

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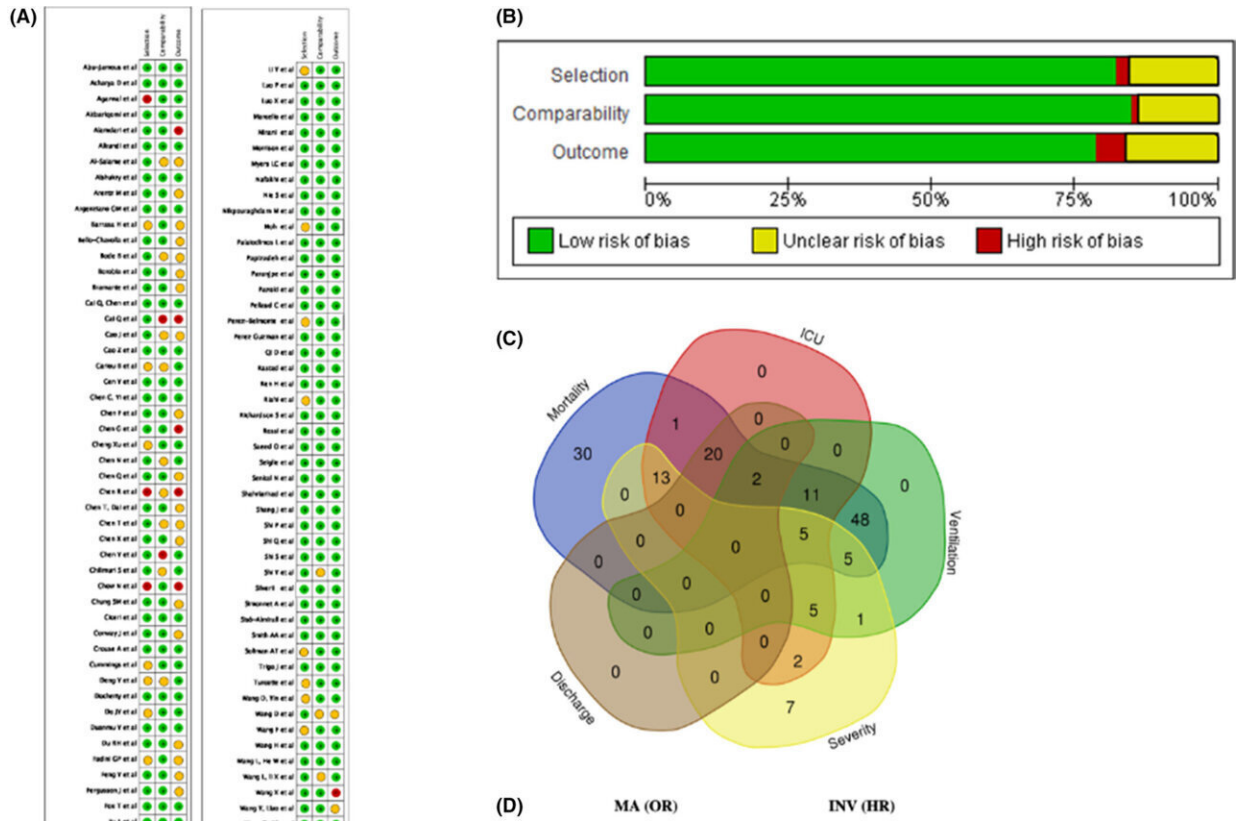

Risk of bias graphs and study data extraction strategy. (A) Review authors' judgements about each risk of bias item per included study. Review authors' judgements about each risk of bias item presented as percentages across all included studies (B). Outcomes addressed by total number of studies and overlap (C), Number of studies used for addressing primary and secondary outcomes (D). Credit: *Endocrinology, Diabetes & Metabolism* (2022). DOI: 10.1002/edm2.338

People with diabetes were almost twice as likely to die with COVID and almost three times as likely to be critically or severely ill compared to those without diabetes.

However, the study conducted by researchers from the University of Aberdeen, which reviewed data from hundreds of thousands of people from all over the world, also found that good management of the condition can mitigate against the risks.

Specifically, the collaboration with King's College, London, found that while diabetes presents a significant risk of severe illness and death with COVID, good control of blood sugar in these patients can significantly reduce this risk.

The researchers reviewed findings from 158 studies that included more that 270,000 participants from all over the world to determine how COVID affects people living with diabetes.

The pooled results showed that people with diabetes were 1.87 times more likely to die with COVID, 1.59 times more likely to be admitted to ICU, 1.44 times more likely to require ventilation, and 2.88 times more likely to be classed as severe or critical, when compared to patients without diabetes.

This is the first time a study, which has been published in *Endocrinology, Diabetes and Metabolism* looked at the risks of COVID in patients with diabetes while factoring in the patients' location and thereby highlighting potential healthcare resources available as well as possible ethnic differences and other societal factors. Data was gathered from all over the world including China, Korea, U.S., Europe and the Middle East.

The researchers found that patients in China, Korea and the Middle East were at higher risk of death than those from EU countries or the U.S.

The researchers suggest this may be due to differences in healthcare systems and affordability of healthcare which may explain the finding that maintaining optimal glycemic control, significantly reduces adverse outcomes in patients with diabetes and COVID.

Stavroula Kastora who worked on the study alongside Professor Mirela Delibegovic and Professor Phyo Myint explains: "We found that following a COVID-19 infection, the risk of death for patients with diabetes was significantly increased in comparison to patients without diabetes.

"Equally, collective data from studies around the globe suggested that patients with diabetes had a significantly higher risk of requiring an intensive care admission and supplementary oxygen or being admitted in a critical condition in comparison to patients without diabetes.

"However, we found that the studies that reported patient data from the EU or U.S. displayed less extreme differences between the patient groups. Ultimately, we have identified a disparity in COVID outcomes between the eastern and western world. We also show that good glycemic control may be a protective factor in view of COVID-19 related deaths.

"In light of the ongoing pandemic, strengthening outpatient diabetes clinics, ensuring consistent follow up of patients with diabetes and optimizing their glycemic control could significantly increase the chances of survival following a COVID infection."

More information: Stavroula Kastora et al, Impact of diabetes on COVID -19 mortality and hospital outcomes from a global perspective: An umbrella systematic review and meta-analysis, *Endocrinology, Diabetes & Metabolism* (2022). DOI: 10.1002/edm2.338

Provided by University of Aberdeen