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the English NHS AAA Screening Programme (NAAASP) ($n = 237\,441$ men) linked with NHS hospital admission and death registry data; and 3) the Framingham Heart Study (FHS) offspring cohort ($n = 649$). Associations between maximal aortic diameter, as measured on ultrasound or computed tomography, and cardiovascular outcomes were examined.

Results: Cardiovascular mortality in the MASS trial, was higher in men with AAA at 13 years of follow up, compared to those without (Hazard Ratio [HR] 2.22, 95% CI 1.97–2.50, $p < .001$). Contemporary risk of major adverse cardiovascular events in the NAAASP was highest in those with an AAA (HR 2.91, 95% CI 2.00–4.25), whilst, extremes of aortic diameter were associated with increased risk for cardiovascular events. Aortic diameter was an independent risk factor for cardiovascular events in the FHS dataset.

Conclusion: Irrespective of the diagnosis of AAA, men attending for AAA screening who are found to have an abnormal aortic diameter are at high risk of future cardiovascular events. This currently unutilised data from AAA screening programmes has the potential to improve preventative management of cardiovascular risk.

How Does SARS-CoV-2 Infection Affect Survival of Emergency Cardiovascular Patients? A Cohort Study From a German Insurance Claims Database



Behrendt C-A, Seiffert M, Gerloff C, L'Hoest H, Acar L, Thomalla G. Eur J Vasc Endovasc Surg 2021;62:119-25.

Objective: A previous study revealed a preliminary trend towards higher in hospital mortality in patients admitted as an emergency with acute stroke during the COVID-19 pandemic in Germany. The current study aimed to further examine the possible impact of a confirmed SARS-CoV-2 infection on in hospital mortality.

Methods: This was a retrospective analysis of health insurance claims data from the second largest insurance fund in Germany, BARMER. Patients hospitalised for ST elevation (STEMI) and non-ST elevation (NSTEMI) myocardial infarction, acute limb ischaemia (ALI), aortic rupture, acute stroke, or transient ischaemic attack (TIA) between 1 January 2017, and 31 October 2020, were included. Admission rates per 10 000 insured and mortality were compared between March – June 2017 – 2019 (pre-COVID) and March – June 2020 (COVID). Mortality rates were determined by the occurrence of a confirmed SARS-CoV-2 infection.

Results: A total of 316 718 hospitalisations were included (48.7% female, mean 72.5 years), and 21 191 (6.7%, 95% CI 6.6% – 6.8%) deaths occurred. In hospital mortality increased during the COVID-19 pandemic when compared with the three previous years for patients with acute stroke from 8.3% (95% CI 8.0 – 8.5) to 9.6% (95% CI 9.1 – 10.2), while no statistically significant changes were observed for STEMI, NSTEMI, ALI, aortic rupture, and TIA. When comparing patients with confirmed SARS-CoV-2 infection (2.4%, 95% CI 2.3 – 2.5) vs. non-infected patients, a higher in hospital mortality was observed for acute stroke (12.4% vs. 9.0%), ALI (14.3% vs. 5.0%), and TIA (2.7% vs. 0.3%), while no statistically significant differences were observed for STEMI, NSTEMI, and aortic rupture.

Conclusion: This retrospective analysis of claims data has provided hints of an association between the COVID-19 pandemic and increased in hospital mortality in patients with acute stroke. Furthermore, confirmed SARS-CoV-2 infection was associated with increased mortality in patients with stroke, TIA, and ALI. Future studies are urgently needed to better understand the underlying mechanism and relationship between the new coronavirus and acute stroke.