

Report

From pandemic Covid-19 to endemic Sars-2 Omicron Disease: is Long Covid still an issue?

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Abstract

For many patients with severe Covid-19 disease of the pre-Omicron era, recovery is far from over with the end of acute symptoms. The authors of this paper have reviewed the currently available studies and conclude that Long-Covid appears to be a serious, sometimes even life-threatening syndrome. However, it seems to have good prospects for full recovery with multidisciplinary and evidence-based post-treatment care, which is, however, still lacking in Europe and North America. The Omicron variant appears to be a game changer in this regard as well. So far it seems that Long Covid is no common consequence of Sars-2-Omicron Disease.

Data

An analysis of electronic medical records² shows that the risk of re-hospitalization or death is significantly increased in the first year after overcoming acute symptoms of pre-Omicron Covid-19 disease, particularly from embolism and stroke. According to a study in the American Medical Journal³, intensive care patients in particular suffer from the below listed sequelae:^{2,3,4,5}

It is known from influenza and numerous other pathogens that many patients recover slowly after a supposed recovery or the end of hospitalization and are susceptible to other illnesses in the months that follow. British scientists have now examined the impact of pre-Omicron Covid-19 on health in the first year after acute symptoms ended.^{4,5}

To do so, they evaluated the contents of the OpenSAFELY database, which has access to just over one-third of the medical records of the population in the United Kingdom of Great Britain and Northern Ireland. This included approximately 25,000 patients who had been hospitalized for a pre-Omicron variant of Covid-19 in 2020 and were still alive one week after discharge. The epidemiologists first compared the data with a 5-fold larger group of adults of the same age and gender who did not have pre-Omicron Covid-19. A second group consisted of about 16,000 patients who had been hospitalized for symptomatic influenza from 2017 to 2019.

The pre-Omicron Covid-19 patients had a 2-fold increased risk of being hospitalized again or dying in the first year after hospital discharge. Bhaskaran determined an adjusted hazard ratio aHR of 2.22, which was significant with a 95% confidence interval of 2.14 to 2.30. This took into account that pre-Omicron Covid-19 patients were more likely to have comorbidities, be overweight or obese, and belong to ethnic minorities in which the risk of disease is higher.

The risk of death compared with healthy controls was increased by almost a factor of 5 (aHR 4.82; 4.48-5.19). The risk of death was also increased compared with influenza patients (aHR 1.74; 1.61 to 1.88). The endpoint of hospitalization or death occurred slightly less frequently in pre-Omicron Covid-19 patients than in influenza patients (aHR 0.95; 0.91-0.98). Among the sequelae that required hospitalization or resulted in death were lower respiratory tract infections (aHR vs healthy 8.47; 7.66-9.37), other respiratory diseases (aHR 4.28; 3.70-4.95), and mental or cognitive disorders (aHR 3.84; 2.97-4.96). The latter include dementias, which are much more common after pre-Omicron Covid-19 than after influenza (aHR 2.32; 1.48-3.64).

Recovery is particularly difficult for patients who have been treated in an intensive care unit. In a survey in the Netherlands as part of the MONITOR-IC study at 11 hospitals in the Netherlands, no fewer than 74% of those affected still reported relevant physical symptoms one year after discharge. Psychological complaints were present in 26%, and cognitive problems were experienced by 16%.

The most common somatic symptoms were a weakened physical condition (39%), joint stiffness (26%), joint pain (2%), muscle weakness (25%), and muscle pain (21%),

before shortness of breath (21%) and sensory disturbances in the limbs (21%). Among psychological effects, anxiety (18%) and depression (18%) were prominent. Overall, nearly 10% suffered from symptoms of post-traumatic stress disorder one year after hospital discharge.

Discussion

As alarming as the Long Covid⁴⁸ numbers might appear, these data lack meaningful comparative collectives. For example, it remains unclear whether endemic human coronaviruses (hCoVs), which are responsible for about one-third of all viral pneumonias in winter, produce such effects as well.^{13,14,15,16,42,48,49,50,51} The endemic hCoVs are scientific orphans, accepted as a given even though they have a much higher case fatality ratio (CFR) than seasonal influenza (influenza pandemics aside) and even Sars-2-Omicron.⁶

Epstein-Barr virus (EBV) is also notorious for its sometimes aggressive clinical course and a long time to complete recovery, as are many other viral infections.^{43,44,45} Therefore, from our point of view, a reasonable assessment of the clinical significance of Long Covid is not yet possible today. However, we assume that Sars-CoV-2 does not cause a never-ending Long Covid. This would be an unlikely feature of a virus leading to the resolution of an initial acute phase. Our observation as treating physicians is an increase in emboli and strokes after pre-Omicron Covid-19 infections as well as after vaccinations leading to the production of the Sars-CoV-2 spike protein (vector and mRNA). This risk seems to remain elevated for the unforeseeable future.⁵²

Pre-Omicron Covid-19, contrary to the legend of Covid as a primary pneumonia (and other distorted data) spread from the Communist Mainland of China, was never a primary pneumonia but a systemic endotheliitis leading to an organizing pneumonia by leaky capillaries (highly simplified).^{46,47} We saw most early deaths (day one to seven) due to thromboses and thus also in the form of ischemic stroke and pulmonary embolism. Those who died from pulmonary and multi-organ failure were those in whom, usually between days seven and ten of illness, instead of a recovering, a cytokine/bradykinin storm set in, organizing pneumonia escalated, and patients eventually died from (multi-)organ failure.^{46,47,52}

Only with the emergence of the Omicron variant did the systemic endotheliitis disease "Covid-19" finally become an (upper) respiratory tract illness with few outliers in terms of more severe courses.¹ To what extent the blood coagulation system is influenced by Sars-2-Omicron can not yet be conclusively assessed at this time. However, our impression as active bedside physicians is that the problem of embolisms/thromboses is either massively reduced with Omicron or is not longer significant. However, to be on the safe side, we continue to administer aspirin or clopidogrel to our patients for a few weeks or many months (dependent on the age and other parameters) after a Sars-2-Omicron disease; even now after the transition to the endemic phase, until it is understood to what extent Omicron is causing inflammatory changes in the vessel walls or if it is affecting the coagulation system. However, with a CFR of 0.4%, we assume that Omicron is, in fact, a hCoV-like

respiratory disease rather than a systemic syndrome.⁶ In this respect, we expect that the problem of serious Long Covid cases will not arise with Omicron and its future sub-variants. There may be isolated cases, but with the jump from Sars-CoV-2 Delta to Sars-CoV-2 Omicron, the virus has changed clinically so profoundly that for Omicron the endemic hCoVs are likely to be more appropriate points of reference than the pandemic Sars-CoV-2 virus. That the full impact of Sars-2-Omicron has not yet been sufficiently understood by colleagues who are doing research only is not surprising. The disease caused by Sars-2-Omicron is so drastically different to pre-Omicron Covid-19 that the scientific community was caught off guard by it and will need some time to integrate the data from clinical reality into their research work in the laboratories.

Conclusion

Patients who had pre-Omicron Covid-19 are indeed at a significantly elevated risk for slow recovery. Most importantly, there is an increased risk of life-threatening thromboses for weeks to many months (possibly even years), which must be curbed by appropriate drug protection, especially in patients >40 years of age and those with preexisting conditions. At the same time, this risk is presumably significantly lower with Omicron, since it appears to actually be most likely an hCoV disease of the upper respiratory tract. In perspective, this raises the question of whether the name "Covid-19" is still appropriate for the disease caused by the Sars-CoV-2 Omicron variant. We, therefore, propose to use the terms "Sars-2-Omicron Disease" or "Sars-2-Omicron" until an official new name will be introduced.

Conflicts of interest

none

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