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Letter to the Editor

Addressing Stroke Admissions During COVID-19 Pandemic Beyond Fear and Constraining Health Factors

We read with great interest the recently published paper by Candelaresi et al¹ addressing the impact of Covid-19 lockdown on stroke admissions. The manuscript further consolidates the evidence that COVID-19 pandemic has an impact on stroke admissions and the associated quality of care.¹⁻⁴ Similar to previous studies,^{2,3} fear of exposure to coronavirus was considered to be an important driver to the reduction of stroke admission. Although the reduction of stroke admissions during COVID-19 was proposed to be driven predominantly by decrease of admission of less severe stroke patients,^{3,4} there are evidence showing that this reduction may occur equally across ethnic groups, ages, and stroke of all subtypes and severity.² One would also expect fear to disproportionately affect people of different socio-demographic status and that seeking emergent care may depend on the severity of stroke at the onset. With different levels of relevance, other factors may also have influenced the rates of stroke admissions during the pandemic. One of these factors is the circumstances at the onset of symptoms. Having a stroke while being outdoor or with the presence of a bystander, increase the chance of receiving prompt stroke treatment.⁵ During the pandemic, and particularly in the lockdown, people suffering stroke may have faced difficulties in seeking help, and this probably irrespectively of the socio-demographic status. Unfortunately, the role of the circumstances at the onset of symptoms, such as presence of bystanders or number of co-habitants, was not addressed in studies investigating the impact of COVID-19 on stroke admission rates.¹⁻⁴ This factor may also have led to the declining rates of reperfusion therapies, as pre-hospital notification and information provided by bystanders is essential to accelerate in-hospital reperfusion decisions.⁵

Nonetheless, in areas heavily affected by COVID-19 the access to neuro-interventional centres may have been challenging and concerns about inter-hospital transfers may have caused a decrease in the rate of patients receiving acute reperfusion interventions.⁶ Last but not least, other non-traditional stroke risk factors or "triggering factors", such as air pollution and infections^{7,8} may contribute to the reduction of stroke admissions. During the pandemic the reduction of both outdoor air pollution and community acquired infections was documented.^{9,10}

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We believe that the reduction of stroke admissions experienced during the pandemic has a multifactorial cause which goes beyond the fear of being exposed to COVID-19 and constraining health factors.

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