



Non-aneurysmal subarachnoid haemorrhage in COVID-19—authors' reply to Kawada T

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Dear Editor:

We are grateful to Dr. Kawada for highlighting additional cases of non-aneurysmal subarachnoid haemorrhage (SAH) which have occurred in the context of severe coronavirus disease 2019 (COVID-19). Indeed, several additional case series have recently been published, including those with pathological findings [1–3], and we anticipate that additional cases of CNS haemorrhagic complications of COVID-19 infection will be reported in emerging registry data.

Although we wish to raise awareness of the risk of SAH in COVID-19, we consider that, for the majority of patients, thrombosis is likely to present a greater risk [4]. However, while early use of prophylactic anticoagulation was associated with lower mortality without an increase in morbidity in a large observational study [5], recruitment to clinical trials of therapeutic anticoagulation in those requiring intensive care unit support has been halted [6]. It remains to be determined, whether immunomodulatory treatment alters the risk of thrombosis and haemorrhage in patients with severe COVID-19 [7].

Until best practice is determined definitively and predication of individual risk improved, we strongly recommend that centres follow credible guidelines such as those issued by the National Institute for Health and Care Excellence (NICE) [8], the International Society on Haemostasis and Thrombosis [9] and the American Society of Hematology [10], with standardised reporting of both thrombotic and

haemorrhagic events occurring in the context of COVID-19 infection.

Declarations

Conflict of interest The authors declare that they have no conflict of interest.

Ethical approval No human participants.

Informed consent No human participants.

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