

# Is spinal anaesthesia an aerosol-generating procedure? Transmission of SARS-CoV-2 from patient to anaesthetist

Felicity Plaat and Jeremy P. Campbell\*

London, UK

\*Corresponding author. E-mail: [jeremy.campbell@nhs.net](mailto:jeremy.campbell@nhs.net)

**Keywords:** aerosol-generating procedure; COVID-19; infection prevention; personal protective equipment; SARS-CoV-2; spinal anaesthesia; transmission

Editor—The recently published study by Zhong and colleagues<sup>1</sup> from Zhongnan Hospital in Wuhan found that 57.1% of anaesthetists who had performed spinal anaesthesia on patients with confirmed coronavirus disease 2019 (COVID-19), wearing a surgical mask, hat, gloves, and gown ('Level 1 personal protective equipment [PPE]'), subsequently tested positive for the virus. In contrast, only 2.7% of those wearing fully encapsulating protective suits, two pairs of gloves, and using self-contained positive pressure breathing apparatus ('Level 3 PPE') became infected. The majority of these patients were women undergoing Caesarean section. Is this evidence that the guidelines on PPE for anaesthetists produced by the Royal College of Anaesthetists in conjunction with the Obstetric Anaesthetists' Association are wrong?<sup>2</sup> This guidance suggests that PPE for aerosol-generating procedures (filtering facepiece 3 [FFP3] mask, gown, gloves, and eye protection but not including the positive pressure breathing apparatus) should be used only if general anaesthesia is planned or there is a chance it will be necessary.

Regional anaesthetic techniques are not classified as aerosol-generating procedures. According to the authors, the anaesthetists had no contact with COVID-19-positive patients 'beyond the operating theatre', and none of the anaesthetists who subsequently tested positive had infected family members. However, at the time of the data collection (from the beginning of January until mid-February 2020) Wuhan was the epicentre of the COVID-19 outbreak with an estimated 75 815 cases in the city by January 25, 2020 and a doubling time of 6.4 days.<sup>3</sup> In addition, the authors stated that a substantial proportion of anaesthetists had symptoms consistent with COVID-19 at the time they administered spinal anaesthesia: 35% had a cough, 25% had a headache, 22.7% had a sore throat, and one had fever. These

findings have not been commented on, but they must call into question the authors' conclusion that wearing Level 3 PPE reduces the risk of transmission of COVID-19 to anaesthetic staff during administration of spinal anaesthesia. We were surprised that the anaesthetists with symptoms of COVID-19 were providing clinical care and not self-isolating. We believe that the study does not provide sufficient evidence to change the current guidelines that anaesthetists performing regional anaesthetic techniques, which are non-aerosol generating, can be cared for using Level 1 PPE.

## Declarations of interest

The authors declare that they have no conflicts of interest.

## References

1. Zhong Q, Liu YY, Luo Q, et al. Spinal anaesthesia for patients with coronavirus disease 2019 and possible transmission rates in anaesthetists: retrospective, single-centre, observational cohort study. *Br J Anaesth* 2020; **124**: 670–5
2. Obstetric Anaesthetists' Association. Summary guidance from PHE/RCoA/AAGBI/RCOG relevant to obstetric anaesthetists. [https://static1.squarespace.com/static/5e6613a1dc75b87df82b78e1/t/5e96d79ef01cf06d99c34920/1586943905918/OAA-PPE-infographic\\_11.04.20.pdf](https://static1.squarespace.com/static/5e6613a1dc75b87df82b78e1/t/5e96d79ef01cf06d99c34920/1586943905918/OAA-PPE-infographic_11.04.20.pdf) (accessed 1 June 2020).
3. Wu JT, Leung K, Leung GM. Nowcasting and forecasting the potential domestic and international spread of the 2019-nCoV outbreak originating in Wuhan, China: a modelling study. *Lancet* 2020; **395**: 689–97

doi: 10.1016/j.bja.2020.05.015

Advance Access Publication Date: 15 June 2020

© 2020 British Journal of Anaesthesia. Published by Elsevier Ltd. All rights reserved.

## More information needed for patients with COVID-19 receiving spinal anaesthesia

Michael Desciak, Amanda Deis and Stephen M. McHugh\*

Pittsburgh, PA, USA