

Nasogastric tube insertion in COVID-19 patients: should we worry about aerosol production?

Colocación de sondas nasogástricas en pacientes con COVID-19: ¿debemos preocuparnos por el riesgo de producción de aerosoles?

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By the end of 2019, in Wuhan, China, numerous cases of community-acquired pneumonia caused by a virus, called severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), were reported. In October 2020, we surpassed the alarming figure of 34 million cases all over the world, with more than 1 million deaths. Multiple comparisons have been made with other coronavirus pandemics, and the impact of the current one is increasingly desolating.

Coronaviruses are mainly spread by birds and mammals. The broadest genetic varieties infect bats, but two subtypes affect the human being: alpha- and betacoronavirus¹. Beta-type coronaviruses include SARS-CoV, Middle East respiratory syndrome coronavirus (MERS-CoV) and the new COVID-19-producing variant SARS-CoV-2; all of them are members of the *Coronaviridae* family of the Nidovirales order².

Therefore, there is an urgent need to determine the ways in which the virus is transmitted between humans and, this way, enable the implementation of measures to prevent its spread. This need stems from the imminent obligation to protect healthcare professionals, who, in the course of their duties, will be exposed to patients with COVID-19. Heinzerling et al.³ showed that 35.5% among 121 health professionals

who cared for a single SARS-CoV-2-positive patient developed symptoms 14 days after exposure and 2.5% tested positive.

There is currently no evidence or recommendations on the risk of nasogastric tube insertion in COVID-19 patients, and the scarce available evidence originates from studies on other infectious diseases. A systematic review found that the procedures that increased the risk of transmission were endotracheal intubation, non-invasive ventilation, tracheostomy, and manual ventilation prior to intubation. Similarly, nasogastric tube insertion was found not to significantly increase the risk of transmission, although only two studies in patients with SARS-CoV-2 infection were included⁴. All these procedures are considered to be aerosol generators according to England's public health guidelines on personal protective equipment against COVID-19 infection⁵.

As an urgent public health issue, the foregoing invites to investigate and identify all the procedures that may put health professionals who daily have direct contact with this type of patients at risk, in view of the imminent need to generate strategies that limit in-hospital infections to the maximum extent possible.

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