

## What About “Surgery in Times of COVID”

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Humanity does not quite understand how an unknown virus has already traveled around the planet and has forced billions of people to hide in their homes. Nor does the scientific community understand it yet. The new pathogen has a high multiplying capacity as well as a high viral load. The coronavirus is testing our system

In the workplace, the most important thing is to maintain protection measures, both general and those that are specifically indicated by the occupational risk prevention services and concentrate on detecting possible cases, their contacts and isolating them so as not to do from the world of work one more transmission agent

COVID-19 has become a global public health problem due to its rapid expansion. It represents a real challenge for health systems, initially lacking information to organize the response to this situation, effective treatments to combat this highly communicable infection and with health personnel with limitations in the provision of personal protective equipment in their daily performance to minimize contagion risks.

Added to this health crisis are other problems related to urgent or urgent surgical indications in patients with suspicion or confirmation of this infection, as well as regarding possible measures to be adopted regarding the safety of surgical teams and their prevention, given discharge possibility of contamination from surgery.

The mechanisms of viral transmission in the operating room are mainly contact with contaminated material (fomites), direct contact with respiratory droplets and aerosolization.

For the anesthesiologist, the greatest risk of exposure to contact with respiratory droplets occurs during airway management (intubation and extubation).

The processes that favor the generation of aerosols in infected and potentially infected individuals in the perioperative environment represent an important source of exposure for surgical teams. The survival of the viral pathogen on environmental surfaces lasts for several days, being able to survive at least 3 days in a variety of materials found in the operating room.

The lack of Personal Protective Equipment (PPE), its incorrect use or the lacks of hand hygiene are other factors that, potentially, can lead to the surgical team becoming infected.

The evidence regarding the effect of SARS-CoV-2 and laparoscopic surgery is scarce and of limited quality; It is worth highlighting the review by Mallick et al. where it is contemplated that there could be a theoretical but not proven risk of transmission during laparoscopic procedures: viral RNA is present in the blood of 1-15% of patients and also the presence of pneumoperitoneum Artificial and the generation of aerosols present in the CO2 leaks can contain viral particles either within the drops of blood or in the smoke generated during surgery. In fact, a specific review in COVID-19 patients already showed that viral RNA in blood was found in almost all (96.8%) patients

Now, as other studies have shown, it is not clear whether viral particles in the blood have the ability to infect other people, since although SARS-CoV-2 RNA could be detected in the blood in most cases, the viral RNA load was very low. Therefore, whether through the respiratory route (smoke-aerosols) or through the blood (blood drops), surgical transmission may be an important factor to consider.

Although there is no scientific evidence to support the association of performing open or laparoscopic procedures and the reduction of COVID-19 transmission, although new information on the disease and its transmission is continually being reported. The theoretical risk of transmission is understood to be the aerosolization of viruses due to the flow and inadvertent loss of the pneumoperitoneum that can expose health personnel. The debate focuses on whether the proper use of aerosolization prevention measures may be sufficient for the laparoscopic technique, since the patient benefits by reducing hospital stay and postoperative pain.

Medicine has gone through different stages throughout life and great are the pandemics that have devastated humanity. This seems to be one more, but it has come to continue living with us, so our clinical practice will have to continue adapting according to the new changes to come.