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## EDITORIAL

## Urological recommendations regarding surgical care of suspected or confirmed SARS-CoV-2 or COVID-19+ patients<sup>☆</sup>



### Recomendaciones en urología para pacientes quirúrgicos sospechosos o confirmados con SARS-CoV-2 o con COVID-19

In relation to the very high infectivity of SARS-CoV-2, we communicate the transmission mechanisms of SARS-CoV-2 with reasonable and prudent measures respecting the urological surgical patient. This is a message with safety purposes and with the knowledge as of 03/24/2020, considering the absence of solid scientific evidence and with current data.

The most common transmission route of the infection is respiratory, person-to-person. The infection is spread by respiratory flügge droplets in the air over up to 2 m distance, which also remain on surfaces. Transmission between presymptomatic people is possible and recent studies indicate that its proportion is close to 50% of cases. In addition, transmission can occur after recovery, which is why isolation measures are recommended for at least 2 additional weeks.

Fecal-oral transmission is unlikely, however, there are demonstrated cases with initial digestive symptoms as entry routes. The presence of the virus can be detected in all respiratory secretions, in nasal smears, in the pharynx, it is found in blood and its presence in urine is unusual. Perinatal transmission has not yet been published as there is no experience.

#### Objectives

- Maximize the safety of patients with indication of urgent elective surgery which cannot be delayed and COVID-19+.
- Protect healthcare personnel from the risks of SARS-CoV-2 infection.
- Protect hospitalized patients from the risks of SARS-CoV-2 infection.

#### Indication of urgent/elective surgery

The first premise in these patients is that surgical interventions will only be addressed in the transmission phase when they cannot be delayed (14–21 days). We will wait for the negative results of the respiratory tests as long as possible. The decision to perform a surgical procedure will always be individualized, with an adequate balance of risks and benefits. It is advisable that the surgical indication is carefully corroborated with the necessary complementary tests and its concordance with the patient's clinical situation.

In some cases of specific diseases, non-surgical alternatives which are safe for the patient should be considered. The team that will perform the intervention must know the protocol of action and wear protective equipment. The surgical area must have personal protective equipment (PPE), which must be requested in advance. The number of personnel required for the anesthetic-surgical intervention should be minimized, and their level of training or experience should be maximized.

Transport to the operating room will be done by the shortest and least crowded route, using the "restricted use" elevators. All the necessary material for the surgical inter-

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vention (instruments, devices, etc.) must be available to minimize in and out transit of the operating room once the patient has arrived. All devices (masks, endotracheal tubes, etc.), fluid replacement therapy and medication must be prepared to reduce manipulation of the anesthesia carts. It is also advisable to label the doors (main and intermediate) of the operating room with COVID-19 signage.

### Personal protective equipment for surgical procedures for patients with suspicion or at risk of coronavirus infection

- Moving patients to the operating room will be done following the designated paths.
- Both the patient and the operating room staff in contact with him will wear a surgical mask until the entrance to the operating room.
- Before entering the surgical area, proceed to hand hygiene with an alcohol-based hand rub (ABHR) and to put on a cap.
- Whenever possible, the operating room should have a scrub area.
- All staff must be aware of the potential risk of exposure and must be registered in the occupational risk prevention service.
- The personnel in the operating room must be reduced to the essential minimum, without there being any additional person.
- Grouping preparation and action activities is recommended to minimize the frequency of proximity to the patient.
- During surgery, a clean assistant will be in charge of supplies, records, and observations.
- Circulating personnel must wear a disposable gown and a surgical mask.
- Equipment kept in the operating room must be minimized to what is essential for patients care. In the same way, everything potentially necessary for surgery must be available inside the operating room to avoid opening doors after the patient's entry.
- Although it is a general rule, it is reminded that the operating room doors will remain closed during the operation.

Staff must wear the following elements of PPE, which will be prepared in the following sequence:

- Before entering the operating room:
  - o Antiseptic hand hygiene with ABHR solution or with disinfectant soap.
  - o Wear a mask with a particle filter such as FFP2 protection during surgical procedures, or a FFP3 mask in the case of aerosol-generating procedures.
  - o Full face shield (preferably against body fluid splashes) and tight full-frame eye protection (for aerosol-generating procedures such as hematuria lavage).
  - o Surgical hand washing with ABHR or with disinfectant soap.
- Inside the operating room:
  - o Single-use, waterproof gown (commonly used in urology operating rooms) with long sleeves. In case of unavailability, placement of sterile gown over waterproof gown.

- o Surgical glove.

After surgery, the PPE used by healthcare personnel will be removed inside the operating room. The doffing of the PPE will follow this sequence (along with hand washing after taking off each part of the equipment):

- Gloves and waterproof gown at the same time.
- Disinfectant hand hygiene with ABHR.
- Cap and face mask or splash-proof goggles or full-frame eyewear (in case of aerosol generation techniques).
- FFP2 or FFP3 mask (for aerosol generation techniques).
- Disinfectant hand hygiene with ABHR.

### Considerations for the operating room

- During intubation, only the anesthesia and nursing staff who will assist surgery will be present in the operating room and will wear the same PPE elements during the intubation procedure.
- In endoscopic procedures, the chest or abdomen should be decompressed from any positive pressure before the trocars are removed to avoid spraying materials from the cavities.
- In urological endoscopic procedures with spinal anesthesia, previous enemas should be avoided, in prevention of diarrhea.
- Lungs and other organs may contain viruses, and additional respiratory protective measures must be taken during aerosol-generating procedures (for example, the use of power saws, hematuria and bowel irrigation).
- The production of aerosols, surgical smoke, should be minimized during surgery, taking the following precautions:
  - When oscillating saws are used, use vacuum aspiration systems.
  - Avoid splashing when removing, manipulating or washing the organs, especially lung tissue, intestines, bladder lavage and catheters.
  - Avoid aerosolization prior to sampling for culture with the use of screw cap containers.
  - High pressure water spray systems should not be used.
  - Cutting or piercing instruments should be avoided as much as possible. In case of using them, they must be equipped with biosafety systems.
- Fingers should not be used to hold or reposition needles or scalpel blades. All manipulations of tissues or sharp instruments will be performed with surgical instruments.
- Verbal orders should be used in the exchange of cutting or piercing instruments within the surgical team.
- A neutral zone for piercing or cutting instruments should be designated at the beginning of the intervention, with the use of a magnetic holder (sterile magnetic drapes).
- To ensure a safe working environment, decontamination, maintenance and disposal protocols -commonly used for other types of microorganisms with a similar risk of spread and transmission mechanism- must be followed.
- All materials, that have been in contact with respiratory secretions or body fluids, including PPE, will be segregated as special category III biomedical waste.

- The use of alternative cutting devices, such as electric scalpels, in preference to the cold scalpel, must be maximized; using the electrosurgical unit even for the skin incision.
- Mechanical sutures should be prioritized over manual ones.
- Under no circumstances should needles be recapped.
- The surgical team should keep a container for sharp or cutting instruments within reach for disposal once they have been used.
- All rules for protection against piercing or cutting instruments must be followed until the end of the intervention, during the collection of surgical material.
- The FFP2 or FFP3 mask has a continuous use duration of 8 h, but it must be disposed after being used in aerosol generating procedures (secretion aspiration, intubation procedures ...).
- Once surgery is completed, environmental and surface hygiene of the operating room will be carried out, which will be cleaned and disinfected according to the protocol of the preventive medicine department.

### Sample collection and transport

- Samples will be prepared at the operating room before being sent to the laboratory.
- Samples should be identified and sent to designated laboratories. The outside of the vial containing the sample will be disinfected with a surface disinfectant or a disinfectant-impregnated wipe and stored in a self-sealing bag.

### Recommended bibliography

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M. Esteban<sup>a,\*</sup>, L. Prieto<sup>b</sup>, J.L. Álvarez-Ossorio<sup>c</sup>, A. Gómez<sup>d</sup>, J.R. Cortiñas<sup>e</sup>, A. Serrano<sup>f</sup>, J.M. Cózar<sup>g</sup>

<sup>a</sup> *Servicio de Urología, Hospital Nacional de Paraplégicos, Toledo, Spain*

<sup>b</sup> *Servicio de Urología, Hospital Universitario San Juan, Alicante, Spain*

<sup>c</sup> *Servicio de Urología, Hospital Universitario Puerta del Mar, Cádiz, Spain*

<sup>d</sup> *Servicio de Urología, Hospital Virgen de la Salud, Toledo, Spain*

<sup>e</sup> *Servicio de Urología, Hospital Clínico Universitario, Valladolid, Spain*

<sup>f</sup> *Servicio de Urología, Hospital Universitario Clínico San Carlos, Madrid, Spain*

<sup>g</sup> *Servicio de Urología, Hospital Universitario Virgen de las Nieves, Granada, Spain*

\* Corresponding author.

[ESTEBOTE@telefonica.net](mailto:ESTEBOTE@telefonica.net) (M. Esteban).