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Letter to the Editor

Risk of SARS-CoV-2 Diffusion when Performing Minimally Invasive Surgery During the COVID-19 Pandemic

There has been widespread diffusion of pure laparoscopic and robotic approaches for the vast majority of urological surgeries. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and the disease it causes, coronavirus disease 2019 (COVID-19), are significantly affecting urological practice in countries that the pandemic has hit more severely. Specifically, recommendations have been suggested to guide reorganization of urological surgeries [1]. Some surgical procedures that should still be performed during the COVID-19 pandemic have been identified, such as radical cystectomy for muscle-invasive or very high-risk non–muscle-invasive bladder cancer; postchemotherapy retroperitoneal lymph node dissection; radical nephrectomy for cT3 tumors; nephroureterectomy for upper tract urothelial cancers; and adrenalectomy for specific adrenal cancers. It is also likely that some other surgical procedures (eg, radical prostatectomy for high-risk prostate cancer and partial nephrectomy for $\geq$ cT1b renal tumors) will be performed in centers located in areas not severely hit by the pandemic where the resources available are sufficient [2]. With this in mind, we read with enormous interest the paper by Zheng et al [3]. Based on the high prevalence of SARS-CoV-2 in stools [4], some reports on the presence of other viruses in surgical smoke (references 2–4 in [3]), some cases of infections in doctors suspected to be related to surgical smoke exposure (reference 5 in [3]), and higher concentration of surgical smoke particles in laparoscopic compared to open surgery, the authors postulated a potential risk of SARS-CoV-2 diffusion during all minimally invasive procedures with possible subsequent infection of medical personnel working in operating rooms.

Although, to the best of our knowledge, cases of this type of transmission have not been reported so far, this issue must be evaluated with particular caution for urologists still allowed to perform minimally invasive procedures during the COVID-19 pandemic. First, the need to use appropriate personal protective equipment should be reinforced. Second, nasopharyngeal samples should be considered for all patients undergoing such procedures, especially as COVID-19 positivity could have a possible impact on their postoperative course. Third, special care must be taken intraoperatively to reduce smoke formation (eg, lowering electrocautery power settings, using bipolar electrocautery, using electrocautery or ultrasonic scalpels parsimoniously to reduce surgical smoke, more extensive use of sutures and clips) or smoke dispersal in the operating room. This is especially important when removing trocars at the end of a procedure, when making a skin incision for specimen retrieval, and in the rare cases of conversion to open surgery. Before such steps, generous use of suction to remove smoke and aerosol should be recommended. In parallel, care must be taken to limit smoke dispersal or spillage from trocars (eg, lowering the pneumoperitoneum pressure). Finally, pressure-barrier insufflator systems that maintain a forced-gas pressure barrier at the proximal end of the trocar might be of benefit [5].

Unfortunately, even urologists who have the privilege of being able to continue performing minimally invasive surgery must rethink details of their activities to minimize the risks for patients and health care workers.

Conflicts of interest: The authors have nothing to disclose.

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