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In response to: Laparoscopic surgery and the coronavirus disease 2019 pandemic: A word from a different hymn sheet

Dear Editor,

We are grateful to Di Saverio et al.[1] for their valuable contribution during the coronavirus disease 2019 (COVID-19) pandemic and for sharing their experience while providing a support for the current guidelines.

However, we find ourselves in disagreement with some of their statements. The mentioned article takes for granted the risk of viral spread through the surgical smoke and pneumoperitoneum and suggests avoiding the laparoscopic approach as much as possible.

While agreeing on the concept of the potential risks of surgical smoke for the theater staff, which have been widely demonstrated, we feel that our clinical decisions during this pandemic must be evidence based to the greatest extent.

On this particular topic, there is no published proof of the presence of COVID-19 in the surgical smoke, and the suspect is only indirect.[2] The available evidence of the presence of active hepatitis B virus (HBV), human immunodeficiency virus (HIV), and human papillomavirus (HPV) viral particles in the surgical smoke is low level and may not apply directly to the COVID-19. At our knowledge, up until now, only one article demonstrated the presence of HBV in the surgical smoke in 10 of 11 HBV-positive patients undergoing laparoscopic or robotic surgery.[3] Several articles demonstrated the presence of HPV in the laser plume,[4] whereas the results of studies on HIV yielded contrasting results.[5] Although there is evidence of patient-surgeon transmission of HPV through the laser smoke, the particular kind of surgery for HPV-related warts, where the surgeon usually stays very close to the surgical field and easily inhales the smoke, makes HPV a biased experimental model for viral transmission during laparoscopic surgery. Despite HIV and HBV being blood-borne viruses, laparoscopic surgery is being performed in HIV and HBV patients for many years, and no clear demonstration is available of viral transmission through the pneumoperitoneum or surgical smoke. On the contrary, COVID-19 has a special tropism for the upper and lower respiratory tract. Viral RNA has been found in stools and blood, but no infective virus has ever been demonstrated in the gastrointestinal tract and in the blood. Furthermore, it must be emphasized that smoke production and evacuation may be even more difficult during laparotomy than laparoscopy, for the absence of a unique smoke escape channel.

For these reasons, we do not believe that results from the available literature can be extrapolated to the COVID-19 pandemic as to justify the current too restrictive guidelines on laparoscopic surgery against the evident and well-known and evidence-based advantages of laparoscopy with respect to the open approach in many fields of surgery. We feel that replacing a grade of recommendation A (known benefits of laparoscopic surgery) with a grade D (avoid laparoscopy on the basis of perceived dangerous laparoscopic smoke) is not consistent with a modern healthcare system.

Last but not the least, we feel that the restrictions placed on the practice of laparoscopic surgery during the pandemic may not be consistent with ethics and professionalism because they reduce the level of care and abdicate to the already world widely accepted criterion standards in surgical care. While this can be acceptable in war scenarios with limited resources, they may not be totally acceptable in the current juncture where, despite undoubtedly facing a challenging pandemic, resources and expertise are widely available and access to the highest standard of care must be granted to everyone.

DISCLOSURE

The authors declare no conflicts of interest.

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Authors' response: Laparoscopy and COVID-19: An off-key song?

Dear Editor,

We thank Tebala et al. for their interest and comments on our article.[1] At the end of their letter, the authors point out that "resources and expertise are widely available" during coronavirus disease 2019 (COVID-19) outbreak and a restrictive use of laparoscopy would have been acceptable only in a war scenario. Unfortunately, the current data resemble many features of this kind of scenario, with shortage of personnel, reduction of surgical services, operating rooms converted in intensive treatment unit (ITU) beds, and surgeons shifted to medical tasks as a global response to the pandemic.[2] As of May 12, 2020, 163 doctors died after contracting COVID-19 in Italy,[3] and health workers are heavily affected globally. In this setting, any additional source of contagion may produce catastrophic effects and threat the entire health system. A tailored strategy to protect health workers and patients, avoiding unnecessary risks, is a priority.[4,5]

A second worst pandemic wave, as in the Spanish flu, cannot be excluded, and a self-preserving strategy must be already in place to guarantee an adequate surgical response in the future outbreak peaks, despite the shortage of personnel, beds, and operating rooms.

Regarding the lack of evidence of SARS-CoV-2 presence in the peritoneal fluid, some anecdotal evidences are emerging. Viral RNA was detected in the peritoneal fluid of a COVID-19 patient who had undergone a laparotomy for a nonischemic small bowel volvulus[6] and in the peritoneal waste of a patient treated with peritoneal dialysis.[7] Thus, a prudential approach may be reasonable until

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definitive evidence is established. Several systems for a safe smoke and pneumoperitoneum evacuation during laparoscopy have been described,[8] but they are time-consuming and add a further burden of intraoperative maneuvers. Furthermore, some operative steps, such as a rapid conversion because of a major bleeding or trocars' removal under vision at the end of the procedure, may compromise a thorough gas exsufflation and, then, may potentially increase the risk of aerosolization and smoke dispersion in the operating theater.

In experienced hands, laparotomy is a quick and gasless procedure with no significant differences in the long-term outcomes compared with laparoscopy.[9]

According with many surgical societies,[10] we recommend to implement nonoperative management strategies whenever clinically appropriate. Thus, treating by laparotomy a reduced number of high-priority elective cases and surgical emergencies (sometimes failures of nonoperative management and, then, associated with a nonnegligible risk of conversion) may represent the safest option for patients, health workers, and system sustainability during the critical periods of COVID-19 outbreak.

DISCLOSURE

The authors declare no conflicts of interest.

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In response to: A multicenter, prospective, controlled clinical trial of surgical stabilization of rib fractures in patients with severe, NONFLAIL fracture patterns (Chest Wall Injury Society NONFLAIL)

To the Editor:

We read with great interest the article by Pieracci et al.[1] on surgical stabilization of rib fractures in patients with severe, nonflail rib fractures. The authors investigated the efficacy of Surgical Stabilization of Rib Fractures (SSRF) for patients with severe, nonflail rib fracture patterns, looking predominantly at self-reported pain scores in addition to pulmonary function, narcotic use, pleural space complications, and disability related quality of life (QoL). We congratulate the authors for their substantial work, but we have some concerns.

First, the amalgamation of randomized and nonrandomized observation arms, where patient selection and parameter control are not accurately possible, leads us to think that the results may not be entirely accurate as the data are not synchronous.[2] Although there was no statistical significance between the two groups with respect to comorbidities, injury patterns, and likelihood of operative intervention, the ability to select treatment course by patients in the observational group introduces potential bias. Including data analysis on the groups individually would have allowed comparison and further clarification of the results.

Second, the authors mention that, although the actual SSRF procedure was uniformly performed, the high frequency of use of locoregional analgesic systems in the operative arms is a confounding parameter. Thoracic epidural catheters and paravertebral block were used in 35% and 13% of the randomized group, respectively, as well as 47% and 12% of the operative arm, respectively. It is well documented in the literature that severe displaced rib fracture patients can do well with the use of only locoregional modalities.[3,4] In addition, choice of locoregional modality was left to the clinical team. Perhaps a uniform use of these adjunctive analgesic modalities usage may have added more discriminatory value to the data.

Furthermore, the authors reported that there were no significant differences in spirometry recordings, overall QoL assessment, and length of stay between the operative and nonoperative arms. They also reported that narcotic use was lower in the operative groups at 2-week follow-up, although not statistically significant ($p = 0.05$). To contrast, they reported that a statistically significant difference in respiratory dependent QoL was seen at the 2-week follow-up visit ($p = 0.03$). However, this same trend is not seen at the 4-week ($p = 0.07$) or 8-week follow-up visit ($p = 0.27$). There was a statistically significant decrease in the numerical pain score among the operative group; this was observed at the 2-week (primary outcome variable), 4-week, and 8-week follow-up visits.

Finally, there was significant loss to follow-up (52.5% observational operative, 55.3% observational nonoperative, 27.3% randomized operative, 58.3% randomized nonoperative). Of the 848 patients who were screened, 87% did not meet the inclusion criteria or met the exclusion criteria. Loss to follow-up only exacerbates a potentially low statistical power and inflates what could be a false discovery rate. Conversely, it may do a disservice by preventing discovery of truly statistical and clinically significant differences.

Regardless of the concerns listed previously, the authors are to be truly congratulated on conducting this singular, milestone study looking at isolated nonflail rib fracture patients with low Injury Severity Score undergoing SSRF early in their hospital course. This study adds to our evolving concepts of rib

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