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## Commentary



## A commentary on “acute appendicitis management during the COVID-19 pandemic: A prospective cohort study from a large UK centre”

## ARTICLE INFO

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## Dear Editor,

We read with interest the study by Antakia et al. [1]. They described the different acute appendicitis (AA) management and complications during the COVID-19 period compared to the pre-COVID-19 period. Some concepts should be clarified.

The authors mentioned more patients received non-operative management in the COVID-19 period, but more patients encountered the complications of abscess formation and free fluid intraoperatively in their study. A meta-analysis by Podda et al. [2] showed that appendectomy was the most effective treatment for patients with uncomplicated AA, with significantly higher efficacy and lower complication rates than non-operative management. However, antibiotics could be more effective in the uncomplicated AA patient subgroup. Thus, an accurate diagnosis of AA severity is mandatory before deciding further management.

As for the concerns of the virus spreading during aerosol-generating surgical procedures, the authors observed more open appendicectomies in their study. The surgical smoke during laparoscopy using electrical or ultrasonic equipment for 10 minutes resulted in a significantly higher particle concentration within the smoke than laparotomy [3]. However, laparoscopy allows the smoke to be concentrated in a closed space in contrast to that emitted continuously during laparotomy. The procedures of smoke evacuation might be easier with laparoscopy than with laparotomy. The European Association of Endoscopic Surgery (EAES) technology committee provided the guidance of smoke evacuation from the abdomen cavity through simple, low-cost adequate filters for laparoscopic surgery due to limited medical resources. For example, Dr. Hamed developed a simple, convenient, and effective technique of using underwater-seal evacuation of surgical smoke in laparoscopy [4].

The UK and Ireland Intercollegiate Board have stated: ‘Laparoscopy is considered to carry some risks of aerosol-type formation,’ but there is currently no evidence that COVID-19 could be transmitted through surgical aerosol [5]. Many surgeons indeed worry about pneumoperitoneum brings about the risk of aerosol exposure to the operating team, especially during the procedures of intentional or unintentional release of carbon dioxide, during insertion or removal of ports, introduction or removal of instruments through the ports, specimen retrieval, or removal of pneumoperitoneum at the end of surgery. For avoiding

smoke leakage around ports, carbon dioxide ventilation should be kept at the lowest levels without compromising the surgical field exposure. We could also use balloon-secured or valve-containing trocars to reduce inadvertent gas leakage. Gasless endoscopic technique is another option for laparoscopic surgery. Nevertheless, some surgeons worry about more significant post-operative pain and surgical stress at abdominal wall lifting sites and comparatively insufficient operating space achieved for the instruments maneuvered effectively and safely.

Laparoscopy generally allows for faster discharge from hospitals, less dealing with surgical wounds and surgical site infections. Thus, the two largest laparoscopic associations, the Society of American Gastrointestinal and Endoscopic Surgeons (SAGES) and the European Association for Endoscopic Surgery (EAES), quickly released their positive attitude towards laparoscopic appendectomy regarding the pandemic [6].

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#### CRediT authorship contribution statement

**Chao-Ming Hung:** Conceptualization. **Hui-Ming Lee:** Conceptualization. **Kuen-Jang Tsai:** Validation. **Ming-Chieh Yang:** Writing – review & editing, Language editing. **Chong-Chi Chiu:** Conceptualization, Writing – original draft, Supervision, Submission, correspondence.

#### Declaration of competing interest

There is no conflict of interest among authors.

#### Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.ijssu.2021.105902>.

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