

## In Reply: Precautions for Endoscopic Transnasal Skull Base Surgery During the COVID-19 Pandemic

To the Editor:

COVID-19 has been spreading all over the world over the past 2 mo.<sup>1</sup> Owing to the striking increase of COVID-19 cases, the safety of medical workers is a concern.<sup>2</sup> Because the virus exists in all parts of the respiratory tract, there is a heated discussion on the timing of surgical treatment of respiratory diseases, especially the safety assessment of endoscopic transsphenoidal surgery in the department of neurosurgery.

Recently, Patel et al<sup>3</sup> submitted an article titled “Precautions for Endoscopic Transnasal Skull Base Surgery During the COVID-19 Pandemic” to remind the neurosurgeon and otolaryngologist to pay attention to the extended endoscopic skull base surgery of patients with COVID-19. In the article, Patel et al<sup>3</sup> cited the co-occurrence of 14 COVID-19 infected medical workers and a COVID-19 affected patient with pituitary adenoma who underwent endoscopic transsphenoidal surgery in our department, and stated the safety issue about the transsphenoidal surgery in this emerging COVID-19 situation. However, what was described does not accord with the facts.

The first argument is about the sentence “multiple members (>14 by report) of the patient care team, both within and outside of the operating room, became infected from what became recognized as human-to-human transmission of COVID-19”. It is not accurate. At the early stage of the COVID-19 outbreak, we had 1 patient who underwent endoscopic transsphenoidal surgery on January 6, 2020 and was diagnosed with COVID-19 13 d later. Among the infected medical workers, 10 nurses and 4 neurosurgeons were diagnosed and only 4 nurses contacted the COVID-19 patient directly.

The second problem is that the authors<sup>3</sup> believed that all the medical workers who participated in the surgery were infected, especially from the experience of the second case that the author cited, for which we have no exact information in Wuhan neurosurgery medical system. However, according to our retrospective survey on our case, none of medical staff who participated in surgery were diagnosed with COVID-19 until March 31, 2020. Today, all the infected medical staff have recovered. More importantly, the medical workers diagnosed with COVID-19 in our department later were the staff who were outside the operation room. As for the infected neurosurgeon in our department, it's conceivable to be deemed as postoperative transmission rather than intraoperative transmission.

Finally, the opinion that the authors<sup>3</sup> delivered should be carefully assessed. The reason why the neurosurgeon and otolaryngologist were infected needs more data to illustrate. According to the whole infection event that we experienced,

we have some facts and experiences to share with the medical community.

The reason why the infection event happened in our department at the early stage is due to little knowledge about COVID-19 and insufficient protective measures. Besides, the frequently interaction between medical workers in our department promoted transmission. Thus, accumulating information about the COVID-19 should be elucidated and reducing contact between people is a necessary means to prevent the spread of the virus.

In this infection event, more nurses were infected than surgeons, because nurses and patients are in direct contact, such as in daily medical care. So, compared to droplet transmission, contact transmission may be an important factor of transmission in medical workers which more likely we ignored at the early stage. Therefore, it is very important to wash hands and clean the surface of objects in wards and living areas. What's more, it is vital to make sure that once COVID-19 patients are confirmed, strict isolation measures must be taken as soon as possible.

As for the transsphenoidal surgery, Patel et al<sup>3</sup> believe that aerosol droplets coming from the endonasal surgery will increase the possibility of infection of medical staff in operating room. However, from our case, we have learned that intraoperative aspirator, protective clothing, N95 mask, and face shield can provide sufficient protection to our medical staff in the surgery room. What Patel et al<sup>3</sup> claimed in their work might provoke unnecessary anxiety toward endonasal endoscopic procedures based on an anecdotal statement.

In sum, as for medical staff, proper protective measures including N95 masks, face shield, protective clothing, and reduced contact with infected patients are necessary. No convincing evidence exists to show that there is an increased possibility of infection from the endoscopic transsphenoidal surgery under the above protective measures. At this emerging COVID-19 situation and for patients' safety, our advice is to avoid selective endoscopic transsphenoidal surgery unless in an emergency case, in which situation level-3 protection is definitely needed and a negative pressure operating room is recommended.

### Disclosures

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