

Letter to Editor Regarding : “The Direction of Neurosurgery to Overcome the Living with COVID-19 Era : The Possibility of Telemedicine in Neurosurgery”

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To the Editor,

We found the article by Lee et al.⁶⁾, entitled “The Direction of Neurosurgery to Overcome the Living with COVID-19 Era : The Possibility of Telemedicine in Neurosurgery” published in your highly valued journal to be really intriguing.

We fully agree with Lee et al.⁶⁾ for the necessity to discuss the role of telemedicine in neurosurgery and the measures required to ensure its optimal use after the COVID-19 pandemic. Based on our own experience and the literature review, we think some additions would enrich the article by Lee et al.⁶⁾.

Telemedicine has been used in neurosurgery since 1995. Before the COVID-19 pandemic, telemedicine was primarily used to evaluate the clinical status and neuroimaging findings of patients from remote hospitals and to assess the possibility for transfer to established centers with technologically equipped neurosurgical departments³⁾.

The COVID-19 pandemic induced significant modifications for the global health care, and neurosurgery in particular. In order to avoid the collapse of national health systems, to reduce the risk of spreading the virus and protect the medical person-

nel, the governments introduced strict limitations of the social interactions of citizens⁴⁾. These measures led to significant health consequences for patients, due to the restricted face-to-face communication with the medical staff. Limited contact with doctors led to promotion of virtual clinical assessment and treatment through telemedicine. The considerable number of infected patients with COVID-19 obliged governments to encourage medical professionals to use telemedicine. This had a positive impact on both neurosurgeons and their patients. In their systematic literature review on the application of telemedicine in neurosurgery, Eichberg et al.²⁾ found that treatment by means of telemedicine was successful in 99,6% of cases. The increased application of telemedicine worldwide revealed the costs and benefits, as well as some limitations that would hinder the use of this method after the COVID-19 pandemic. To the indicated by Lee et al.⁶⁾ advantages of telemedicine, we would add both the implementation of quality triage of patients and the rationalization of the preparation for their hospital admission - measures that significantly reduce the costs for the medical facilities¹⁾. In addition, telemedicine could considerably increase the quality of neurosurgical care by providing the pos-

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sibility for consultations with leading neurosurgeons and professional training of young doctors and residents through educational courses online^{1,7)}. The established advantages of telemedicine prompt most neurosurgeons to maintain its use as a promising and effective option in certain cases after the end of the COVID-19 pandemic. Introduction of modern information and communication technologies worldwide will create significant advantages for more efficient usage of resources and management of medical and pharmaceutical care⁵⁾.

In order to enforce the application of telemedicine in routine practice, it is necessary to overcome some of its current limitations. Informational and educational campaigns should be performed for medical specialists and patients about the benefits of telemedicine. Citizens should acquire the necessary technical knowledge. National boards of specialties should develop guidelines for the indications and the scope for application of telemedicine. National governments must adopt clear legal regulations for maintaining confidentiality in the transfer and storage of personal data, define possible liability for omissions and the payment for the health services.

In conclusion, we would like to note that it is absolutely necessary to take advantage of the lessons learned during the COVID-19 pandemic and include telemedicine into routine medical practice.

AUTHORS' DECLARATION

Conflicts of interest

No potential conflict of interest relevant to this article was reported.

Informed consent

This type of study does not require informed consent.

Author contributions

Conceptualization : BK; Data curation : AD; Formal analysis : IK; Funding acquisition : AD; Methodology : BK; Project administration : PA; Visualization : PA; Writing - original

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