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CLINICAL IMAGE

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Unilateral digital clubbing in hemiplegia due to a putaminal hemorrhage

Takeshi Kinjo | **Wakako Arakaki** | **Jiro Fujita**

Department of Infectious, Respiratory and Digestive Medicine, Graduate School of Medicine, University of the Ryukyus, Nishihara, Japan

Correspondence
Takeshi Kinjo, Department of Infectious, Respiratory and Digestive Medicine, Graduate School of Medicine, University of the Ryukyus, 207 Uehara, 903-0215 Nishihara, Okinawa, Japan.
Email: t_kinjo@med.u-ryukyu.ac.jp

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Abstract

Digital clubbing usually occurs bilaterally; however, unilateral clubbing can be seen in hemiplegia and local vascular lesions. We highlight a case of unilateral digital clubbing due to putaminal hemorrhage. Further accumulation of cases will enable exploration of the mechanisms of clubbing.

KEYWORDS

clubbing, hemiplegia, nail, putaminal hemorrhage, unilateral

A 61-year-old male patient diagnosed with hypopharyngeal cancer (cT2N0M0) was referred for preoperative evaluation of lung function. He had a right-sided putaminal hemorrhage 10 years prior, followed by left-sided hemiplegia. Although respiratory function tests and chest imaging were normal, physical examination revealed left-sided, unilateral digital clubbing (Figure 1A,B).

Nail is a mirror of systemic diseases; therefore, its observation is critically important in medical examination. In the evaluation of clubbing, the diamond-shaped space normally formed by placing bilateral nails together and the distal phalangeal to interphalangeal depth ratio are easy and useful tools in bedside practice. Congenital cyanotic heart diseases and interstitial lung diseases are common causes of bilateral clubbing, possibly owing to the role of platelet-derived growth factor (PDGF) and vascular endothelial growth factor (VEGF). Clubbing is generally bilateral; however, unilateral clubbing may occur in some conditions such as hemiplegia and local vascular lesions.[1] One study reported that nail pathologies such as longitudinal reddish striation, neapolitan nails, and unilateral clubbing were observed in the fingers of the affected side in patients with hemiplegia due to stroke (6%, 3%, and 2%, respectively).[2] As the PDGF/VEGF theory cannot explain unilateral clubbing, tropic changes and edema of the soft tissues under nails due to local autonomic dysregulation have been hypothesized. As the pathophysiology of clubbing is not fully

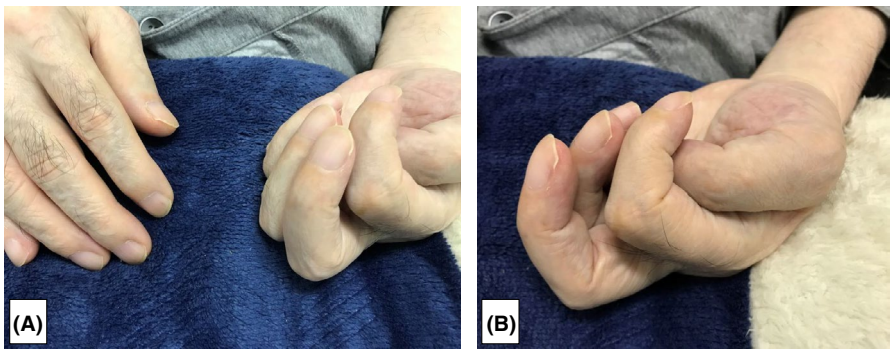

FIGURE 1 (A) Nails on the left fingers were hypertrophied and clubbed. Note that nails on the right fingers were normal. (B) Nail bed angles of the left index, middle, and ring fingers were straightened to around 180 degrees

understood, further studies are therefore needed to clarify the mechanism of clubbing.

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CONFLICT OF INTERESTS

The authors declare that there is no conflict of interest.

AUTHOR CONTRIBUTION

TK, WA, and JK wrote the draft and approved the manuscript for submission. All authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

CONSENT

Written informed consent was obtained from the patient for the publication of this clinical image.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

ORCID

Takeshi Kinjo https://orcid.org/0000-0002-0262-0401

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