Received: 16 November 2021 | Accepted: 23 November 2021

DOI: 10.1002/emp2.12620

JACEP OPEN
JOURNAL OF THE AMERICAN COLLEGE OF EMERGENCY PHYSICIANS OPEN
A GLOBAL JOURNAL OF EMERGENCY MEDICINE
Open Access
WILEY

IMAGES IN EMERGENCY MEDICINE

General Medicine

Edema of the upper limbs

Shun Tanaka MD[1] | **Shota Kodaira MD**[2] | **Hiraku Funakoshi MD, MPH**[3]

[1] Department of Emergency and Critical Care Medicine, Tokyo-bay Urayasu Ichikawa Medical Center, Urayasu, Japan

[2] Department of Internal Medicine, Tokyo-bay Urayasu Ichikawa Medical Center, Urayasu, Japan

[3] Department of Emergency and Critical Care Medicine, Department of Interventional Radiology, Tokyo-bay Urayasu Ichikawa Medical Center, Urayasu, Japan

Correspondence
Shun Tanaka, MD, Tokyobay Urayasu Ichikawa Medical Center, Department of Emergency and Critical Care Medicine, 3-4-32 Todaijima, Urayasu, Chiba 279-0001, Japan.
Email: tanasunta1227@gmail.com

1 | PATIENT PRESENTATION

A 58-year-old man presented to the emergency department with swelling and pain in his left upper extremity. The symptom started on the back of his hand and spread to his upper arm within a day. His left upper extremity was swollen and hot, with some blistering, and he complained of severe pain (Figure 1A). Although no white blood cells or bacteria were detected in the blisters, cellulitis or necrotizing soft tissue infection was suspected. Therefore, he was treated with antimicrobial agents and discharged 7 days later. However, one month later, he presented with abdominal distension and diarrhea. Computed tomography with enhanced agent detected edematous changes in the small intestine with ascites (Figure 1B). His abdominal symptoms disappeared in about 3 days without specific treatment.

2 | DIAGNOSIS

2.1 | Hereditary angioedema

Based on decreased C4 and C1 inhibitor levels, he was diagnosed with hereditary angioedema. His father also had recurrent episodes of edematous lesions. The prevalence of hereditary angioedema is about 1 in 60,000, making it a rare disease.[1] Most cases of hereditary angioedema cause edema of the extremities, intestinal tract, and larynx, and laryngeal edema can be fatal. However, the swelling resolves spontaneously in about 1–4 days without treatment.[2] When acute edema occurs in the intestinal tract or soft tissues, pain may be more prevalent than edema. When we see edematous lesions of different phases across multiple organs, we need to consider hereditary angioedema.

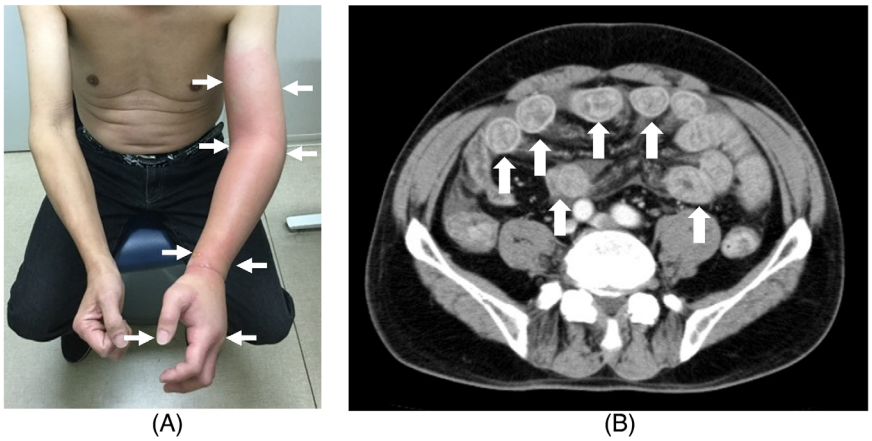

FIGURE 1 (A) White arrows show acute edema of his left upper extremity with some blister. (B) White arrows show small bowel dilatation with ascites

This is an open access article under the terms of the Creative Commons Attribution-NonCommercial-NoDerivs License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.
© 2022 The Authors. *JACEP Open* published by Wiley Periodicals LLC on behalf of American College of Emergency Physicians

REFERENCES

1. Nordenfelt P, Nilsson M, Bjorkander J, Mallbris L, Lindfors A, Wahlgren C-F. Hereditary angioedema in Swedish Adults: report from the National Cohort. *Acta Derm Venereol*. 2016;96(4):540-545.
2. Cicardi M, Agostoni A. Hereditary angioedema. *N Engl J Med*. 1996;334(25):1666-1667.

How to cite this article: Tanaka S, Kodaira S, Funakoshi H. Edema of the upper limbs. *JACEP Open*. 2022;3:e12620. https://doi.org/10.1002/emp2.12620