Internal Medicine
The Japanese Society of Internal Medicine
doi: 10.2169/internalmedicine.6865-20
Intern Med 60: 2701-2702, 2021
http://internmed.jp

【 PICTURES IN CLINICAL MEDICINE 】

Phlegmasia Caerulea Dolens Misdiagnosed as Acute Limb Ischemia

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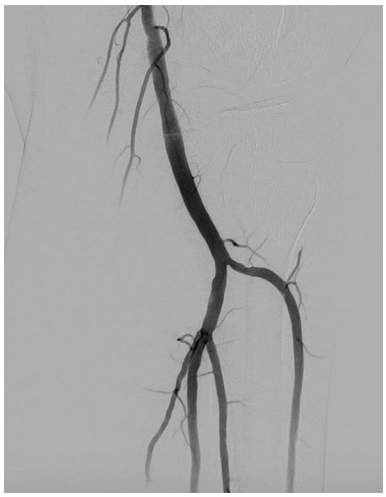
Key words: phlegmasia caerulea dolens, three-dimensional computed tomography, deep venous thrombosis

(Intern Med 60: 2701-2702, 2021)
(DOI: 10.2169/internalmedicine.6865-20)

Picture 1.



Picture 2.

A 65-year-old man complained of a sudden onset of left leg pain 14 days after percutaneous coronary intervention due to acute myocardial infarction. An emergency physician confirmed that his dorsalis pedis artery was unpalpable and ordered a contrast computed-tomography (CT) examination. Three-dimensional volume rendering CT revealed sudden disruption of the left popliteal artery (Picture 1), which led to a misdiagnosis of acute limb ischemia (ALI). However, subsequent angiography revealed that the popliteal artery had no significant stenosis with severely delayed blood-flow (Picture 2). A retrospective CT-review and visual inspection revealed a swollen left leg and subcutaneous tissue edema, indicating a venous thrombus at the inguinal level (Picture 3). Subsequent echography confirmed severe deep venous thrombosis below the left femoral vein, named phlegmasia caerulea dolens (PCD).

Venous return disturbance, due to deep venous thrombosis, increased peripheral tissue pressure and subsequent peripheral arterial resistance can prevent contrast CT from blushing the below-knee arteries. This causes severely delayed blood-flow. This phenomenon could have been identified had CT imaging been conducted at the appropriate phase, demonstrating that real-time assessment in the CT room is crucial. Non-vascular information obtained from conventional axial CT-imaging, such as the difference in the diameter of the bilateral lower limbs and the presence of subcutaneous tissue edema, are also useful findings for making a differential diagnosis.

The clinical presentations of PCD can mimic ALI (1). Although this patient was poorly managed, the case is suggestive and instructional in reminding us of the critical importance of careful physical examination and image reading

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Received: December 4, 2020; Accepted: January 18, 2021; Advance Publication by J-STAGE: March 8, 2021
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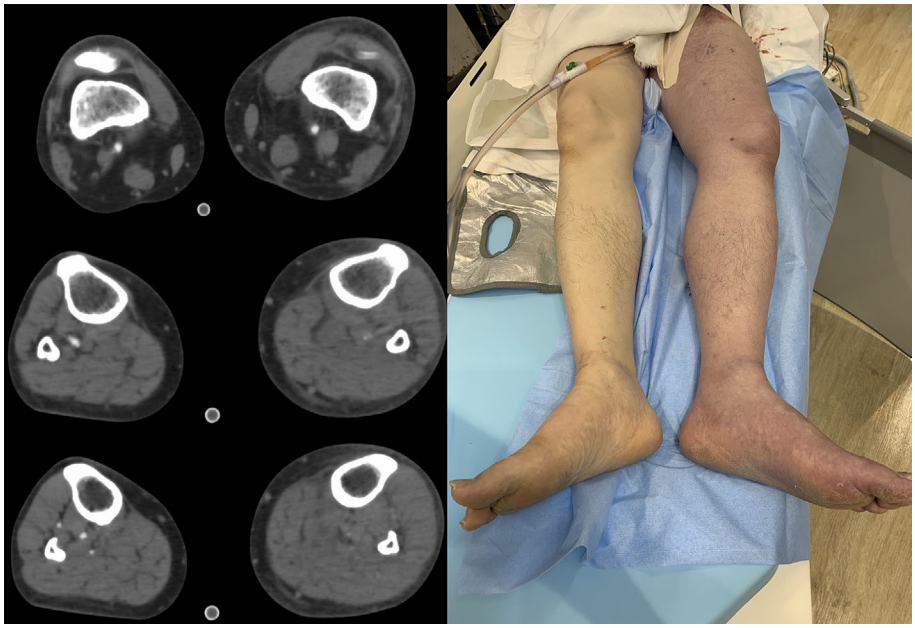

Picture 3.

without prejudice.

The authors state that they have no Conflict of Interest (COI).

Reference

1. Perkins JMT, Magee TR, Galland RB. Phlegmasia caerulea dolens and venous gangrene. Br J Surg **83**: 19-23, 1996.