



Internal Medicine Flashcard

A man with fever and aortitis

Nana Akazawa^{a,*}, Naoya Itoh^a, Masashi Ando^b^a Division of Infectious Diseases, Aichi Cancer Center Hospital, 1-1 Kanokoden, Chikusa-ku Nagoya, Aichi 464-8681, Japan^b Department of Clinical Oncology, Aichi Cancer Center Hospital, 1-1 Kanokoden, Chikusa-ku, Nagoya, Aichi 464-8681, Japan

1. Case description

A 54-year-old man presented with a chief complaint of fever and pain around the left clavicle. He had a primary germ cell tumor of the mediastinum and had been undergoing chemotherapy for approximately six months. To prevent myelosuppression, pegfilgrastim was administered after each chemotherapy session. Pegfilgrastim was administered 4 days before the onset of fever and pain. On examination, he had a body temperature of 38.1 °C and pain in the left arm. Laboratory findings showed elevated C-reactive protein level (19.4 mg/dL). Contrast-enhanced computed tomography (CT) revealed soft-tissue thickening around the aortic arch (Fig. 1A). Blood cultures were negative; moreover, tests for autoantibodies, including myeloperoxidase-antineutrophil cytoplasmic antibody (MPO-ANCA) and proteinase-3-antineutrophil cytoplasmic antibody (PR3-ANCA), were negative and his IgG4 levels were not elevated. As the symptoms showed improvement, he was managed conservatively and not given steroid treatment. Five days after the diagnosis, the fever and pain had resolved, without treatment, and his C-reactive protein level decreased (6.2 mg/dL). Two months later, contrast-enhanced CT showed improvement in the thickening of the aortic arch wall (Fig. 1B).

What is the diagnosis?

1.1. Diagnosis

Granulocyte colony-stimulating factor vasculitis caused by pegfilgrastim.

2. Discussion

Large vessel vasculitis is often caused by Takayasu arteritis or giant cell arteritis. Other causes include infections, drugs, and IgG4-related periarteritis. In this case, blood cultures were negative and infectious aortitis was ruled out. Furthermore, the patient was negative for IgG4, and based on the history, we diagnosed granulocyte colony-stimulating

factor (G-CSF)-induced vasculitis. Among G-CSF preparations, pegfilgrastim is the most frequently reported cause of vasculitis [1]. Vasculitis has been reported to occur for an average of 5 days (range: 1–8 days) after the last dose of G-CSF [2]. The most common sites of vasculitis are the thoracic and abdominal aorta, carotid artery, and subclavian artery. Steroid treatment is the most common and effective treatment, but vasculitis may resolve without treatment [3]. The prognosis is good in most cases, but aortic dissection has been reported as a serious complication. The occurrence of fever after G-CSF administration indicates a possibility of drug-induced vasculitis. In such cases, diagnostic imaging is useful.

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Declaration of interest

None

Consent

The patient provided written informed consent for the publication of his personal and clinical details, along with any identification.

Declaration of Competing Interest

None declared

* Corresponding author.

E-mail addresses: nanazo_7zo@yahoo.co.jp (N. Akazawa), n.ito@aichi-cc.jp (N. Itoh), mandoh@aichi-cc.jp (M. Ando).

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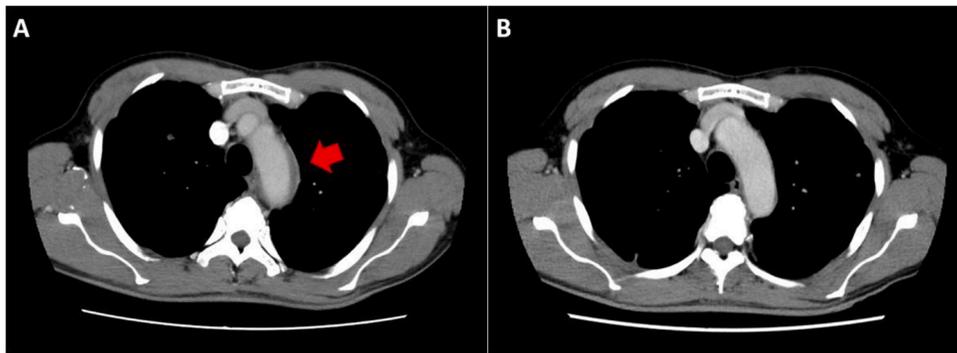


Fig. 1. Thoracic aorta imaged by computed tomography (CT) . Images at the time of visit (A) and about 2 months later (B) are shown. (A) Contrast-enhanced CT showed soft tissue thickening around the wall of the aortic arch(arrow). (B) After 2 months, CT showed improvement in wall thickening.

References

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