

CLINICAL PICTURE

Non-episodic angioedema with eosinophilia after BNT162b2 mRNA COVID-19 vaccination

A 77-year-old Japanese woman presented with peripheral oedema following COVID-19 vaccination. Three weeks before, the day after the second dose of BNT162b2 mRNA COVID-19 vaccination, she presented with low-grade fever, peripheral oedema and arthralgia of the bilateral foot joint. Fever and arthralgia were relieved spontaneously within a week. Since there was no improvement in the peripheral oedema, she was referred to our department. Her medical history revealed type 2 diabetes mellitus and dyslipidaemia, for which she had been prescribed 500 mg/day of metformin and 10 mg/day of atorvastatin. Physical examination revealed symmetrical non-pitting oedema of her legs (Figure 1a). Laboratory tests showed blood eosinophilia (3750/ μ l). The serum IgM level was within normal. Non-episodic angioedema with eosinophilia (NEAE) was diagnosed. Her symptoms improved quickly with prednisolone

administration (20 mg/day) (Figure 1b). She has been recurrence-free after tapering off prednisolone.

Angioedema with eosinophilia is of two types: episodic angioedema with eosinophilia (EAE; Gleich's syndrome) and NEAE.^{1–3} EAE has been reported mainly in Europe and the USA, whereas NEAE in Korea and Japan.⁴ EAE is characterized by recurrent episodes of angioedema, urticaria, fever and increased body weight, with markedly high peripheral blood eosinophil count and serum IgM levels.^{1,2} NEAE is characterized by a single episode of persistent oedema of the extremities, peripheral eosinophilia, transient arthralgia, lack of increased serum IgM levels and a less severe clinical course than that of EAE.^{2,3} NEAE can occur after influenza vaccination; however, NEAE after COVID-19 vaccination has not been previously reported.⁵ NEAE is also characterized by the effectiveness of low-dose prednisone or spontaneous remission within 2–3 months.^{2,3}

In conclusion, non-pitting oedema of the extremities with eosinophilia should be considered eosinophilic angioedema, which can occur after COVID-19 vaccination.

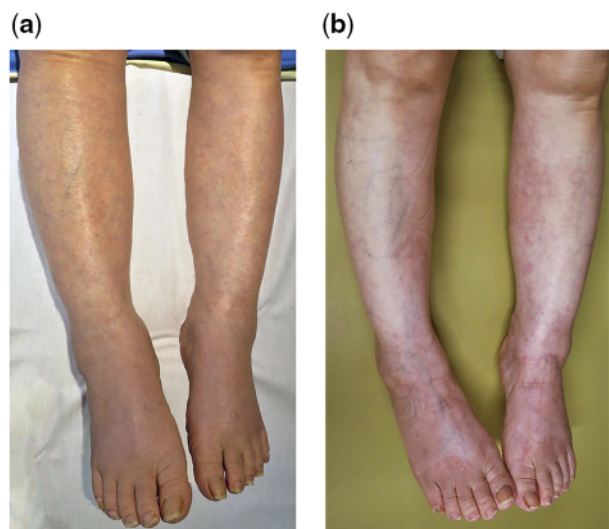




Figure 1 (a) Physical examination revealed symmetrical non-pitting oedema of her legs; (b) her symptoms improved quickly with prednisolone administration (20 mg/day).

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Conflict of interest. None declared.

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