

LETTER TO THE EDITOR

Anaphylaxis due to bromovalerylurea

Dear Editor,

Bromovalerylurea (BU) is a sedative and hypnotic drug, which was originally discovered at the beginning of the 20th century. BU, combined with non-steroidal anti-inflammatory drugs, is widely used as an over-the-counter medication for the common cold. Although BU has been in use for more than 100 years, there are only a few instances of reported drug eruptions due to BU in the existing published work.¹ Here, we present a case of anaphylaxis due to BU, which was proven using a prick test.

A 53-year-old woman was referred to us for consultation regarding a detailed examination for anaphylaxis. She had taken a Nokai[®]-N tablet (Nunokame Inc., Hyogo, Japan) because of a headache. It was the second use of the tablet and she had no past history of urticaria. Five minutes after taking the medication, she noticed general fatigue and a skin rash. She was taken to the emergency room, and a physical examination revealed that her systolic blood pressure was lower than 50 mmHg. Wheals were observed over her whole body. She was diagnosed with anaphylaxis and was treated with an i.m. injection of epinephrine.

Anaphylaxis due to the Nokai-N tablet was strongly suspected. Nokai-N is mainly composed of acetaminophen, BU, ethenzamide and anhydrous caffeine. Prick tests were performed by using a 10% (diluted with saline) solution of Nokai-N, acetaminophen, BU, ethenzamide and anhydrous caffeine (all materials were provided by Nunokame Inc.). Of these, Nokai-N and BU tested positive (Fig. 1), so she was diagnosed with anaphylaxis due to the BU contained in Nokai-N.

According to our investigations, only nine cases of drug eruption caused by BU have been previously reported (eight cases in Japan and one in the English-language published work). These included six fixed drug eruptions, one urticaria, one toxic epidermal necrolysis and one anaphylaxis.¹ The current case is the second case report of anaphylaxis caused by BU.

The most interesting observation is that, although BU has been used worldwide, all nine eruption cases were discovered

in Japan. Recently, the relationships between genetic background and immediate type allergic reaction or aspirin intolerance has attracted considerable attention.²⁻⁴ For example, gene variants of human leukocyte antigen (HLA)-DRA and the HLA-DRA–HLA-DRB5 interregion has been observed in penicillin-induced immediate allergic reaction by genome-wide association study.² Whereas, in the case of aspirin-intolerant urticaria, HLA-DB1*0609 has been identified as a possible genetic marker.⁴

According to these observations, which suggest that certain HLA alleles could be genetic markers for certain immediate type drug eruptions, it is possible to speculate that genetic differences may contribute to a distinctive BU hypersensitivity rate. Further investigations would be needed to determine whether this speculation is accurate.

CONFLICT OF INTEREST: None declared.

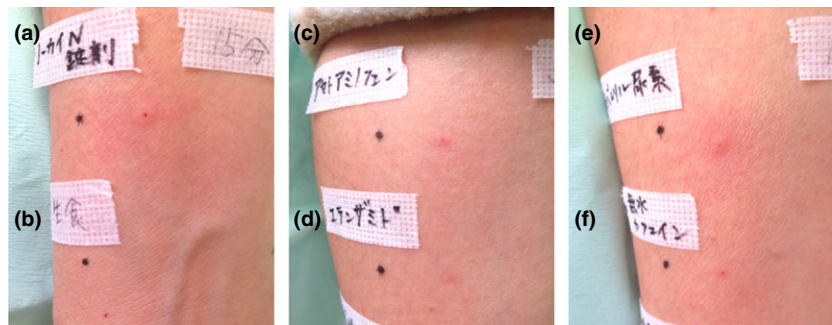
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Figure 1. Skin prick tests for (a) Nokai[®]-N, (b) saline, (c) acetaminophen, (d) ethenzamide, (e) bromovalerylurea (BU) and (f) anhydrous caffeine. Positive reactions were observed for both Nokai-N and BU.



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