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Yasuhiro Horiuchi

Division of Dermatology, Tsuruse Orthopedic Clinic, Saitama, Japan

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Case Report

Agapanthus allergic contact dermatitis: A case report

Yasuhiro Horiuchi

Division of Dermatology, Tsuruse Orthopedic Clinic, Saitama, Japan

Email: tshoriuchi15@gmail.com

Abstract

Background: Agapanthus (Lily of the Nile) is a genus in the flowering plant family Amaryllidaceae. Contact dermatitis caused by flowering plants is common, but there are no reports of contact dermatitis caused by this plant, Agapanthus.

Case Illustration: An 82-year-old Japanese man had cultivated Agapanthus in his home garden. After breaking the stem of the leaf while wearing shorts, he noticed erythematous rashes on the thighs. The patch test of the leaf stem sap "as is" showed mildly positive, with erythematous papules.

Discussion: The patch test confirmed the allergic contact dermatitis of Agapanthus with leaf stem sap. There are many well-known flowering plants, like lilies, daisies, jasmine, orchids so on, that can cause contact dermatitis. To date, many people fold Agapanthus flowers and decorate them at home, so far, this plant should also be added to the causative plant for contact dermatitis.

Conclusion: To the best of our knowledge, there are no reports of contact dermatitis caused by this plant. Agapanthus contact dermatitis will need to be brought to people's attention.

Keywords: *agapanthus, contact dermatitis, flowering plants*

Background

Agapanthus¹ (Lily of the Nile) (Figure 1A), is a genus in the flowering plant family Amaryllidaceae and is known as lily of the Nile, or African lily in the UK, but not lilies. Even though it can also be seen in some southern countries like Australia, Mexico, Ethiopia, and Jamaica, all of the species are native to southern Africa, including South Africa, Lesotho, Eswatini, and Mozambique. Because of its small, lily-like, beautiful flowers, it can be planted in the home flower garden as an ornamental plant.² Although contact dermatitis caused by flowering plants is common,^{3,4,5} this report describes a rare case of contact dermatitis caused by Agapanthus leaf stem sap.

Case Illustration

An 82-year-old Japanese man consulted the dermatology clinic and exhibited linear or spot erythema on the thighs (Figure 1B (point with an arrow)) and suspected contact dermatitis. The patient had cultivated Agapanthus in his home

garden, and after breaking the stem of the leaf while wearing shorts, he noticed erythematous rashes 3 days before visit and assumed that this was the cause, so he brought the leaves and stems with him. This was the first time for him. With topical 0.1% betamethasone cream, the skin lesions cleared within approximately one week.

Figure 1C shows the closed patch test of the leaf stem sap "as is": S: square gauze soaked in leaf stem sap; L: leaf; C: control with only square gauze, for 48 hours of exposure, was mildly positive, with erythematous papules, for sap (Figure 1C, point with an arrow), confirming contact dermatitis caused by Agapanthus leaf stem sap. The patient has signed informed consent and approved of the clinical photos and case for publication.

Discussion

In the present case, the patch test confirmed the allergic contact dermatitis of Agapanthus with leaf stem sap, which can be mediated by the interaction



Figure 1. (A) Agapanthus, (B) Linear or spot erythema on the thighs at consultation (point with an arrow), (C) Results of patch tests on the forearm with S: square gauze of plaster soaked in leaf stem sap; L: leaf on plaster gauze; and C: control with only square gauze for 48 hours of exposure, were mildly positive, with erythematous papules, for the sap (arrow).

of immunoregulatory cytokines and discrete subpopulations of T lymphocytes, especially hapten-specific T cells.⁶ Agapanthus is not an extremely rare ornamental plant. But there are many well-known flowering plants,^{3,4,5} like lilies,⁷ daisies,⁸ jasmine,⁹ orchids,¹⁰ so on, that can cause contact dermatitis.

Even though this plant grows naturally in southern countries,¹ and is common in this area, it is strange that there are no reports of contact dermatitis caused by this plant. It is thought that many people fold wild Agapanthus flowers and decorate them at home. People in this area may not be sensitive to this plant, unlike people in Japan, which is far from the southern countries where it grows naturally.

Conclusion

To the best of our knowledge, there are no reports of contact dermatitis caused by this plant. As in this case, many people will grow and enjoy Agapanthus, a tropical flowering plant. Because of this, Agapanthus contact dermatitis will need to be brought to people's attention.

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Conflict of Interests

No conflict of interest.

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