




# Severe photoallergy to systemic dronedarone (Multaq)

Rand Al-Jarrah | Annette Blasini | Zsuzsanna Kurgyis | Knut Brockow |  
Bernadette Eberlein 

Department of Dermatology and Allergy Biederstein, School of Medicine, Technische Universität München, München, Germany

## Correspondence

Bernadette Eberlein, Department of Dermatology and Allergy Biederstein, School of Medicine, Technische Universität München, Biedersteiner Str. 29, D-80802 München, Germany.

Email: bernadette.eberlein@tum.de

**KEYWORDS:** case report, dronedarone, photoallergy

Dronedarone, a non-iodinated congener of amiodarone, is a class III antiarrhythmic agent, approved by the U.S. Food and Drug Administration (FDA) in 2009. The most common side effects of dronedarone are diarrhea, nausea, and abnormality of liver function.<sup>1</sup> Compared to amiodarone, photosensitivity is a rare adverse reaction and only a few case reports exist.<sup>2-4</sup> Here we describe the first case of a severe photoallergic drug reaction with dronedarone use.

## CASE REPORT

In February 2019, cardiologists started a therapy with dronedarone 400 mg (Multaq) twice daily orally for rhythm control along with apixaban (Eliquis) in a 64-year-old woman. Four weeks later she noticed redness on her cheeks after sitting in

the sun for 1.5 hours. The next day she took a long walk in the sun; overnight she developed redness and swelling of her face, neck, and backs of her hands with itching, worsening during the following day. Dronedarone was discontinued and she was treated with a steroid ointment and antihistamines. Two days later, pronounced edema in the previously affected areas developed. On laboratory investigations, liver enzyme levels were four times higher than the normal limit. She was given oral steroids. Because healing was prolonged, Eliquis was additionally discontinued. The skin lesions remained for another 3 to 4 weeks and spread to the upper arms, neck, and décolleté (Figure S1). Complete healing was achieved after 6 weeks, with an increased sensitivity to sunlight remaining throughout the summer.

Photopatch testing with Multaq (crushed film-coated tablets in pet., Sanofi-Aventis, Frankfurt, Germany) "as is" was positive (++) 2 and 3 days after irradiation with 5J/cm<sup>2</sup> UVA (Figure S2). Eliquis (crushed film-coated tablets in pet., Bristol Myers Squibb, New York City, New York) "as is" was negative. Patch tests with the two drugs and photopatch tests using the German and European baseline series were negative except for fragrance mix 8.0% in the non-irradiated area.

## DISCUSSION

Phototoxicity is a common side effect of amiodarone, but with dronedarone, a structural analogue of amiodarone, photosensitivity and skin discoloration has occurred in only 0.7% patients compared to 0.3% in the placebo group.<sup>1</sup> Experimental photosensitization studies using THP-1 cells and interleukin 8 (IL-8) as biomarkers showed that dronedarone is likely to cause skin photosensitization,<sup>5</sup> but only three clinical cases of phototoxicity to dronedarone have been reported. Complete healing after discontinuation or photoprotective measures occurred within a few weeks.<sup>2-4</sup> In contrast, our patient experienced a prolonged period of illness with spreading over the primarily affected areas. A skin biopsy was not obtained, but together with the positive photopatch test we diagnosed a photoallergic drug reaction to Multaq. To our knowledge this is the first reported case of dronedarone-induced photoallergy in the literature.

## AUTHOR CONTRIBUTIONS

**Bernadette Eberlein:** Conceptualization; investigation; methodology; writing-review and editing. **Rand Al-Jarrah:** Writing-original draft. **Annette Blasini:** Investigation. **Zsuzsanna Kurgyis:** Investigation. **Knut Brockow:** Supervision.

## ORCID

Bernadette Eberlein  <https://orcid.org/0000-0003-4509-6491>

## REFERENCES

1. Singh BN, Connolly SJ, Crijns HJ, et al. Dronedarone for maintenance of sinus rhythm in atrial fibrillation or flutter. *N Engl J Med.* 2007;357(10):987-999.
2. Ladizinski B, Elpern DJ. Dronedarone-induced phototoxicity. *J Drugs Dermatol.* 2013;12(8):946-947.
3. Kuo S, Menon K, Kundu RV. Photosensitivity reaction from dronedarone for atrial fibrillation. *Cutis.* 2014;94(5):E10-E11.
4. Datar P, Kafle P, Schmidt FM, Bhattarai B, Mukhtar O. Dronedarone-induced phototoxicity in a patient with atrial fibrillation. *Cureus.* 2019; 11:e5731(9). <https://doi.org/10.7759/cureus.5731>
5. Marcolino AIP, Macedo LB, Nogueira-Librelo DR, Vinardell MP, Rolim CMB, Mitjansc M. Comparative evaluation of the hepatotoxicity, phototoxicity and photosensitizing potential of dronedarone hydrochloride and its cyclodextrin-based inclusion complexes. *Photochem Photobiol Sci.* 2019;18(6):1565-1575.

## SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of this article.

**How to cite this article:** Al-Jarrah R, Blasini A, Kurgyis Z, Brockow K, Eberlein B. Severe photoallergy to systemic dronedarone (Multaq). *Contact Dermatitis.* 2020;83:241-242. <https://doi.org/10.1111/cod.13577>