

# **Bikini Contact Dermatitis Due to Mercaptobenzothiazole**

## Dermatite de Contacto a Biquíni Secundária ao Mercaptobenzotiazol

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Figure 1 – Linear erythematous and edematous plaques distributed along the contact area with the rubber bands of the bikini straps (A); Patch test results on day three. Positive reactions were found to mercaptobenzothiazole 2.0% pet (+), mercapto mix 2% pet (+), N-cyclohexyl-2-benzothiazolesulfenamide 1% pet (+), 2-(4-morpholinylmercapto)benzothiazole 0.5% pet (+), dibenzothiazyl disulfide 1% pet (+) and bikini rubber straps 'as is' (+). The patient was advised to minimize exposure to rubber products (B).

A 30-year-old woman with no history of allergies or atopy presented with pruritic linear erythematous plaques distributed along the area of the bikini straps after wearing a wet bikini for several hours (Fig. 1A). Since allergic contact dermatitis (ACD) was suspected, patch testing was performed with the European Baseline Series, textile and rubber additives series and the dry bikini 'as is'. Positive reactions were found to the bikini straps 'as is' and to several rubber additives including Mercapto mix (+) and 2-Mercaptobenzothiazole 2.0% pet (+) (Fig. 1B), confirming the diagnosis of ACD. Textile contact dermatitis is a common condition caused by different allergens and irritants.¹ Mercaptobenzothiazole, an additive used in rubber products, is a frequent cause of hand and foot dermatitis by footwear and gloves.¹ However, ACD to rubber components in clothing is rarer.²

In this case, the allergic reaction only occurred with a wet swimsuit, pointing to the role of water in dissolving the mercaptobenzothiazole molecules from the rubber straps.

## **AUTHOR CONTRIBUTIONS**

CF: Data collection and writing of the manuscript.

FC: Writing of the manuscript.

MG: Critical review of the manuscript.

## PROTECTION OF HUMANS AND ANIMALS

The authors declare that the procedures were followed according to the regulations established by the Clinical Research and Ethics Committee and to the Helsinki Declaration of the World Medical Association updated in 2013.

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#### **DATA CONFIDENTIALITY**

The authors declare having followed the protocols in use at their working center regarding patients' data publication.

## **PATIENT CONSENT**

Obtained.

### **REFERENCES**

 Lisi P, Stingeni L, Cristaudo A, Foti C, Pigatto P, Gola M, et al. Clinical and epidemiological features of textile contact dermatitis: an Italian multicentre study. Contact Dermatitis. 2014;70:344-50.

#### **COMPETING INTERESTS**

The authors have declared that no competing interests exist.

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