

cryoglobulin.<sup>4</sup> For patients with non-IgM MGUS and multiple myeloma, novel myeloma directed therapies such as bortezomib should be considered; while rituximab-alkylator-based therapy may be more appropriate for patients with IgM MGUS and Waldenström's macroglobulinaemia.<sup>4</sup>

T. Gambichler,\* T. Schug, M. Doerler

Department of Dermatology, Skin Cancer Center, Ruhr-University Bochum, 44791, Bochum, Germany

\*Correspondence: T. Gambichler. E-mail: t.gambichler@klinikum-bochum.de

**Linked article:** This article is commented on by D. Lipsker, p. e167 in this issue. To view this article visit <https://doi.org/10.1111/jdv.15397>.

## References

- 1 Lipsker D. Monoclonal gammopathy of cutaneous significance: review of a relevant concept. *J Eur Acad Dermatol Venereol* 2017; **31**: 45–52.
- 2 Brouet JC, Clauvel JP, Danon F *et al*. Biologic and clinical significance of cryoglobulins. A report of 86 cases. *Am J Med* 1974; **57**: 775–788.
- 3 Sidana S, Rajkumar SV, Dispenzieri A *et al*. Clinical presentation and outcomes of patients with type 1 monoclonal cryoglobulinemia. *Am J Hematol* 2017; **92**: 668–673.
- 4 Payet J, Livartowski J, Kavian N *et al*. Type I cryoglobulinemia in multiple myeloma, a rare entity: analysis of clinical and biological characteristics of seven cases and review of the literature. *Leuk Lymphoma* 2013; **54**: 767–777.

DOI: 10.1111/jdv.15403

## Extensive cutaneous necrosis in monoclonal cryoglobulinemia: an example of monoclonal gammopathy of cutaneous significance

Editor

Dr. Gambichler reports a patient who perfectly demonstrates the relevance of the concept of monoclonal gammopathy of cutaneous significance (MGCS).<sup>1,2</sup> His patient had monoclonal (type 1) cryoglobulinemia-related skin necroses in the context of multiple myeloma. This case is reminiscent of the patient shown in figure 4 in my review.<sup>2</sup> Indeed, the photos are those of a woman who started becoming symptomatic in her early twenties by developing initially retiform purpura and then widespread skin necrosis each winter. The following treatments did not allow control of her disease: prednisone, azathioprine, cyclophosphamide, rituximab and intravenous immunoglobulins. Plasma exchanges were efficient but with rapid relapses. Intensification with 5 cycles of VAD (vincristine, adriamycin and methylprednisolone) followed by melphalan-conditioning autologous stem

cell transplantation (ASCT) had no clinical or biological effect. Dexamethasone and lenalidomide, then bortezomib combined to doxorubicin and etoposide, were also ineffective. Only a second ASCT with high-dose bendamustine conditioning allowed control of her symptoms.<sup>3</sup> Furthermore, numerous investigations, including bone marrow biopsies and imaging studies never allowed visualizing a malignant clone in this patient. Thus, she illustrates the concept of MGCS even better than Dr. Gambichler's patient who was diagnosed with multiple myeloma and thus would anyway not have been considered as having a monoclonal gammopathy of undetermined significance.

D. Lipsker\*

Faculté de Médecine, Université de Strasbourg et Clinique Dermatologique, Hôpitaux Universitaires, Strasbourg, France

\*Correspondence: D. Lipsker. E-mail: dan.lipsker@chru-strasbourg.fr

**Linked article:** This article is commented on by T. Gambichler *et al.*, pp. e166–e167 in this issue. To view this article visit <https://doi.org/10.1111/jdv.15403>.

## References

- 1 Gambichler T, Schug T, Doerler M. Disseminated skin necroses in a patient with multiple myeloma and monoclonal cryoglobulinaemia. *J Eur Acad Dermatol* 2019. <https://doi.org/10.1111/jdv.15403>.
- 2 Lipsker D. Monoclonal gammopathy of cutaneous significance: review of a relevant concept. *J Eur Acad Dermatol Venereol* 2017; **31**: 45–52.
- 3 Martin M, Lipsker D, Fornecker LM, Toussaint E, Martin T. Bendamustine conditioning for refractory type I cryoglobulinemia. *Joint Bone Spine* 2016; **83**: 591–592.

DOI: 10.1111/jdv.15397

## Letter to The Editor on 'Evaluation of antimicrobial textiles for atopic dermatitis'

Dear Sirs,

Recently, JEADV published an article titled 'Evaluation of antimicrobial textiles for atopic dermatitis' giving an assessment on ten silver-coated and one non-silver AEGIS-coated (DermaSilk) textiles in one group and two untreated textiles as control group.<sup>1</sup>

There seems to be a major bias in this study design because the mechanism of action of the coated garments are different, not comparable, and should not be analysed as part of the same trial group. Silver-containing textiles distribute ions to the skin; thus, evolving antibacterial properties, AEGIS-coated textiles, such as DermaSilk, do not distribute ions, their mechanism of action is different. They simply inactivate micro-organisms on infected skin and mucosa when they come in contact with the fabric, thus

even after washing because the antimicrobial is silanized on the fabric.<sup>2</sup> Apparently, this work does not refer to the recent literature concerning AEGIS-coated products. As there have been clinical studies on DermaSilk since 2006, for several indications showing good results not only in atopic dermatitis, but also in lichen sclerosus, diabetic ulcers, vulvovaginal candidosis and acne vulgaris, Steinmann even proved DermaSilk comparable to topical corticosteroid in relieving symptoms of atopic dermatitis.<sup>3</sup>

Furthermore, the study uses the wrong ISO standard for the measurement of antibacterial activity. They used international standard ISO 22196 (JIS 2801) used for plastics and other non-porous surfaces which actually does not apply to antibacterial-treated textile products, as they are covered by ISO 20743.<sup>4</sup> This error invalidates any results. Lastly, the authors discuss the results of CLOTHES-trial<sup>5</sup> and it's sized down PLoS version.<sup>6</sup> This study shows some bias even in the recruiting phase as they included 300 children by their eligibility measured according to the Nottingham Eczema Severity Score (NESS) >9 denoting moderate to severe disease over the last 12 months. NESS was taken in account for the recruitment of patients, otherwise, when, for example, using Eczema Area and Severity Index (EASI) >7 at baseline, perhaps the recruitment phase would have taken much longer. This could also have led to a broad variation in eczema severity at baseline, as there was a wide range of severity measured with EASI score from 4.2 to 12.0 at baseline. If they would have been recruited by their eligibility measured according to the EASI >7 at baseline, the results would be much more diagnostically conclusive than shown here. A second bias also in this study emerges by not distinguishing between zinc-coated and AEGIS-coated textiles. After that, the children were randomized in two groups, one offering standard topical treatment (STANDARD) and one offering standard treatment plus the interventional garment (INTERVENTION) using two different kinds of interventional products: one AEGIS-coated (DermaSilk) and one zinc-coated (DreamSkin). That appears not justifiable because the two products have different modes of action, and therefore, they should not be mixed up one group. For the evaluation of itching and sleep loss as major symptoms of moderate to severe atopic eczema, the Patient-Oriented Eczema Measure (POEM) is a useful tool for the measurement of treatment outcomes even if EASI scores do not change. Statistically significant POEM results observed in the study were dismissed by the authors. POEM evaluation should have been taken into account. Altogether, this study design does not apply to good clinical practice standards.

In the guidelines for the treatment of atopic dermatitis of 2012, published in JEADV, textiles coated either with silver<sup>7</sup> or AEGIS ADM 5772/S<sup>8</sup> are recommended for reduction of *Staphylococcus aureus* colonization and eczema severity, but it has been mentioned that these new options are still under investigation and stated 'Of note, there is some concern about the safety of silver-coated textiles in infants and toddlers'.<sup>9</sup> In the US

Atopic Dermatitis Guidelines published 2014 in JAAD, textiles were not recommended as there are still 'gaps in research to be closed'. Finally in the new European Dermatology Forum guidelines part I, published 2018, all coated textiles with antimicrobial activity are not recommended any more without respect of their different mode of action.<sup>10</sup> In our opinion, this ejects AEGIS-coated textiles from the market, even if they have been proved for amending symptoms of various dermatological conditions in several newer studies.<sup>3</sup> Thus, because they were thoughtlessly evaluated together with zinc-coated products in a negligent study design, as there were two different fabrics DermaSilk and DreamSkin evaluated in one interventional group.<sup>5,6</sup>

No funding sources supported this work.

D. Kopera\*

Department of Dermatology, Medical University Graz, Graz, Austria

\*Correspondence: D. Kopera. E-mail: daisy.kopera@medunigraz.at

**Linked article:** This article is commented on by A. Wollenberg et al., p. e169 in this issue. To view this article visit <https://doi.org/10.1111/jdv.15401>.

## References

- 1 Srour J, Berg E, Mahltig B, Smolik T, Wollenberg A. Evaluation of antimicrobial textiles for atopic dermatitis. *J Eur Acad Dermatol Venereol* 2018; Epub ahead of print. <https://doi.org/10.1111/jdv.15123>
- 2 Mandrioli P. DermaSilk® fabric treated with AEGIS – chemical test. Consiglio Nazionale delle Ricerche, Istituto di Scienze dell'Atmosfera del Clima, 2003.
- 3 Schaunig C, Kopera D. Silk textile with antimicrobial AEM5772/5 (DermaSilk): a pilot study with positive influence on acne vulgaris on the back. *Int J Dermatol* 2017; **56**: 589–591.
- 4 <https://www.iso.org/standard/54431.html>
- 5 Thomas KS, Bradshaw LE, Sach TH *et al.* Randomised controlled trial of silk therapeutic garments for the management of atopic eczema in children: the CLOTHES trial. *Health Technol Assess* 2017; **21**: 1–260.
- 6 Thomas KS, Bradshaw LE, Sach TH *et al.* Silk garments plus standard care for treating eczema in children: a randomized, controlled, observer-blind, pragmatic trial (CLOTHES Trial). *PLoS Med* 2017; **14**: e1002280.
- 7 Gauger A, Fischer S, Mempel M *et al.* Efficacy and functionality of silver-coated textiles in patients with atopic eczema. *J Eur Acad Dermatol Venereol* 2006; **20**: 534–541. Erratum *J Eur Acad Dermatol Venereol* 2006; **20** (6): 771.
- 8 Ricci G, Patrizi A, Bendandi B, Menna G, Varotti E, Masi M. Clinical effectiveness of a silk fabric in the treatment of atopic dermatitis. *Br J Dermatol* 2004; **150**: 127–131.
- 9 Ring J, Alomar A, Bieber T *et al.* For the European Dermatology Forum (EDF), and the European Academy of Dermatology and Venereology (EADV), the European Task Force on Atopic Dermatitis (ETFAD), European Federation of Allergy (EFA), the European Society of Pediatric Dermatology (ESPD), and the Global Allergy and Asthma European Network (GA2LEN). Guidelines for treatment of atopic eczema (atopic dermatitis) Part I.
- 10 Guideline Subcommittee "Atopic Eczema" of the European Dermatology Forum. EDF-Guidelines for Treatment of Atopic Eczema (Atopic Dermatitis) Part I, 2018.

DOI: 10.1111/jdv.15399