

Peristomal allergic contact dermatitis – case report and review of the literature

J. A. MARTIN, T. M. HUGHES AND N. M. STONE

Department of Occupational Dermatology, Royal Gwent Hospital, Newport, South Wales NP20 2UB, UK

Allergic contact dermatitis (ACD) is a rare cause of peristomal skin problems. Only 23 cases have previously been reported in the literature. We report the case of a colostomy patient with a severe disabling blistering peristomal dermatitis. Patch testing to a British Contact Dermatitis Society standard series, medicaments and a plastics and glues series was negative. Patch testing to the patient's own products gave a positive reaction (+) at D2 and D4 to Dansac[®] soft paste and Stomahesive[®] paste. Further patch testing to the components of Dansac[®] soft paste showed a positive (+) reaction at D2 and D4 to ester of polymethyl vinyl/maleic acid copolymer (Gantrez[®]-ES) only. This is the first reported case of ACD due to Dansac[®] soft paste. ACD to Gantrez[®] has previously been reported but in different products. We also review the other previously reported cases of ACD causing peristomal dermatitis and stress the importance of patch testing in these cases, in particular to the patient's own products, as avoidance of identified allergens can have a large impact on the quality of life.

Key words: allergic contact dermatitis; Dansac[®] soft paste; Gantrez[®]; stoma. © Blackwell Munksgaard, 2005.

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Peristomal skin disorders are commonly self-reported by patients with abdominal stomas, ranging from 37% in colostomy patients to over 80% in those with ileostomies (1). Irritant contact dermatitis is the most common underlying cause, but allergic contact dermatitis (ACD) has been reported. Persistence of these skin problems can be associated with significant morbidity. Patch testing to identify relevant contact allergens can potentially have a great impact on the quality of life of these patients.

Case Report

A 63-year-old lady presented with peristomal irritation and blistering over a 12-month period causing a significant impact on her quality of life. She had undergone total colectomy with ileostomy formation in 1963 for ulcerative colitis. She had used both Dansac[®] soft paste and Stomahesive[®] paste at different times to prevent leakage problems. There was no history of previous contact allergy.

The patient was patch tested to an extended British Contact Dermatitis Society standard series, medicaments and plastics and glues series, as well as to the patient's own products including Dansac[®] soft paste and Stomahesive[®] paste. At

D2 and D4, there was a positive (+) reaction to the patient's own adhesive pastes only. She was further patch tested to the components of Dansac[®] soft paste as supplied by the manufacturer (Dansac, Cambridge, UK). Components of Stomahesive[®] paste were not available from the manufacturer (ConvaTec, Deeside, UK). At D2 and D4, the patient only showed a positive (+) reaction to ester of polymethyl vinyl/maleic acid (PMV/MA) copolymer as is (Gantrez[®]-ES; Table 1). Since

Table 1. Patch test results

Patch test	D2	D4
Dansac [®] soft paste (as is)	+	+
Stomahesive [®] paste (as is)	+	+
Components of Dansac [®] soft paste		
Ester of PMV/MA copolymer (as is)	+	+
Ester of PMV/MA copolymer (50% pet.)	–	–
Silica (as is, 50% pet.)	–	–
Allantoin (10%, 50% pet.)	–	–
Butyl paraben (3% pet.)	–	–
Methyl paraben (3% pet.)	–	–
Gelatin (as is, 50% pet.)	–	–
Pectin (as is, 50% pet.)	–	–
Polysorbate 20 (50% pet.)	–	–
Polyacrylamide (10% pet.)	–	–

PMV/MA = polymethyl vinyl/maleic acid; pet. = petrolatum.

changing her stoma adhesive to one not containing Gantrez[®]-ES, her peristomal dermatitis has settled completely.

Discussion

Contact allergy to Gantrez[®] causing peristomal dermatitis has been previously reported in only 2 patients (2, 3). In both cases, this was through the use of Stomahesive[®] paste. To our knowledge, this is the first reported case of contact allergy to Gantrez[®]-ES in Dansac[®] soft paste.

Gantrez[®] is a PMV/MA copolymer that is available in several forms. It is used in these various forms in a wide variety of hygiene and cosmetic products such as toothpastes,

mouthwashes, denture fixatives and hairstyling aerosols. Gantrez[®]-ES copolymers are half-ester derivatives produced by reacting the anhydride form with the corresponding alcohol and are available with different alkyl chain lengths. These esters are used particularly in enteric film coatings and ostomy adhesives. Both Dansac[®] soft paste and Stomahesive[®] paste contain Gantrez[®]-ES 425.

The majority of patients with peristomal dermatitis have a contact irritant dermatitis, particularly due to exposure of the skin to urine or faecal leakage. ACD appears surprisingly rare. In Salford, UK, a cohort of 142 patients with abdominal stomas (colostomy, ileostomy and urostomy) and self-reported peristomal skin disorders were investigated. Only 1 patient was

Table 2. Reported cases of allergic contact dermatitis (ACD) in peristomal skin problems

Age (years)	Sex	Stoma	Primary condition	Relevant positive patch tests	Reference
63	Female	Ileostomy	Ulcerative colitis	Dansac [®] soft paste Stomahesive [®] paste Gantrez [®] -ES	Our patient
14	Female	Ileostomy	Ulcerative colitis	Propylene glycol Stomahesive [®] paste Gantrez [®]	(3)
48	Female	Ileostomy	Crohn's disease	Adhesive ring of stoma bag (Salts Simplicity [®]) Polyisobutylene	(6)
58	Female	Colostomy	Colon carcinoma	Adhesive remover wipe (AllKare [®])	(7)
57	Female	Urostomy	Bladder carcinoma	Adhesive remover wipe (AllKare [®]) d-limonene	(7)
N/R	N/R	N/R	N/R	Ostomy bag Epoxy resin	(8)
N/R	N/R	N/R	N/R	Ostomy bag Epoxy resin	(8)
N/R	N/R	N/R	N/R	Ostomy bag Epoxy resin	(8)
N/R	N/R	N/R	N/R	Ostomy bag Epoxy resin	(8)
N/R	N/R	N/R	N/R	Ostomy bag Epoxy resin	(8)
N/R	N/R	N/R	N/R	Ostomy bag Epoxy resin	(8)
48	Female	Colostomy	N/R	Stomahesive [®] wafer Stomahesive [®] paste Gantrez [®] -R Gantrez [®] -ES225	(2)
76	Male	Colostomy	Bowel obstruction	Stomahesive [®] paste Dihydroabietyl alcohol (Abitol)	(9)
N/R	N/R	N/R	N/R	Stoma bag deodoriser	(4)
69	Male	Colostomy	N/R	Balsam of Peru DOR stoma deodorant	(5)
40	Female	Colostomy	Ulcerative colitis	Karaya seal ring	(10)
N/R	N/R	N/R	N/R	Lanolin	(11)
N/R	N/R	N/R	N/R	Rubber in stoma bag	(11)
N/R	N/R	N/R	N/R	Stoma bag strap	(11)
41	Female	Urostomy	Neurogenic bladder	Squibb [®] system 2 pouch material Epoxy resin	(12)
47	Female	Ileostomy	N/R	Stoma bag (Squibb [®]) Epoxy resin	(13)
77	Female	Ileostomy	Colon carcinoma	Stoma bag (Combihesive Squibb [®]) Epoxy resin	(14)
74	Male	Colostomy	N/R	Rubber seal of stoma bag (Colodress [®]) Diaminodiphenylmethane	(15)

N/R = not recorded.

shown to have ACD (0.7%) compared to 47% having an irritant reaction. Other patterns of peristomal skin problems that were observed included pre-existing skin disease such as psoriasis and infection (4).

There have only been 23 cases of ACD causing stoma-related dermatitis previously reported in the literature (2–15). Various aspects of stoma care can cause exposure to potential allergens including the stoma bag itself (9 cases), seal rings (3 cases), strapping (1 case), adhesive devices (3 cases), adhesive removers (2 cases) and deodorants (2 cases). Allergens that have been identified as causes of peristomal dermatitis include epoxy resin, polyisobutylene, diaminodiphenylmethane, rubber, lanolin and fragrances (Table 2). There was also a case of finger and facial dermatitis occurring in the carer of a stoma patient due to citronella oil in a stoma deodorant (5). Peristomal skin is a high-risk site for the development of ACD. The skin often has a pre-existing irritant contact dermatitis, and the chemicals of the stoma device are all applied under occlusion. The low frequency of reported cases of peristomal ACD must indicate the relative hypoallergenic nature of the peristomal appliances currently used. Application of well-recognized allergens such as fragrance and epoxy resin in peristomal care should be discouraged.

In summary, we have reported the first case of ACD to Dansac[®] soft paste. Our patient was allergic to the Gantrez[®]-ES component of the paste. She suffered a severe blistering dermatitis with a great adverse effect on her quality of life, which has now completely settled following identification of the allergen through patch testing allowing subsequent avoidance. Although ACD is an unusual cause of peristomal dermatitis, we would use this case to highlight the importance and continued need for patch testing in these patients, particularly to their own products.

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Address:

Dr Julie Martin

Department of Dermatology

Royal Gwent Hospital

Newport

South Wales NP20 2UB

UK

Tel: +44 1633 234234

Fax: +44 1633 215729

e-mail: jamartin@doctors.org.uk