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Allergic Contact Dermatitis Due to Daily Soap Products: A Case Report

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Abstract

Allergic contact dermatitis (ACD) is a skin disorder resulting from contact with an allergenic substance. ACD is mostly caused by cosmetics and daily products. This study aims to diagnose and identify the causative allergens in a patient presenting with hand dermatitis suspected of being ACD from soap exposure. This case report describes contact dermatitis caused by soap suspected of containing sodium lauryl sulfate (SLS) and fragrance, confirmed by a positive patch test result. This research employed a qualitative case report design to conduct an in-depth investigation of a single clinical presentation of Allergic Contact Dermatitis. A history of using dish and hand soap products was obtained. Dermatologic examination showed multiple erythematous patches with overlying squamous, xerotic skin suggestive of ACD. The patient underwent patch testing with standardized materials and materials brought by the patient to confirm the diagnosis. The patient showed positive reactions to Sunlight® dishwashing liquid soap, Super Pell® mop soap, Wow® dish soap, Calmic® hand soap, and So Iln® liquid detergent. The diagnosis of basal cell carcinoma (BCC) can be established based on anamnesis, physical examination, and anatomical histopathological assessment. Diagnosis of BCC is accomplished through accurate interpretation of the skin biopsy results. Histopathological examination should be performed in cases of doubtful lesions, large tumors, or ulcerations for which the diagnosis is uncertain, as well as assessing surgical margins. Therapy for BCC is both preventive and curative. Therapy selection depends on the patient's age and gender, as well as the site, size, and type of lesion.

Keywords: allergic contact dermatitis, soup, sodium lauryl sulfate, fragrance, patch testing

INTRODUCTION

Allergic contact dermatitis (ACD) is a skin disorder that occurs due to contact with an allergenic substance (Lombardi et al., 2018). Allergic contact dermatitis (ACD) is a type IV hypersensitivity reaction to external chemicals (allergens) that occurs only in susceptible individuals and begins with sensitization (Vocanson et al., 2020; Schmidt et al., 2021). Allergic contact dermatitis (ACD) develops as a result of reactive compounds that trigger both innate and adaptive immune responses (Divkovic et al., 2021). It results from contact with chemicals or antigens that come into contact with the skin, subsequently producing a T-cell-mediated response (Saint-Mezard et al., 2022). The reaction in ACD is divided into two phases: the sensitization phase and the elicitation phase (Peiser et al., 2021; Kim et al., 2023).

First, the sensitization phase, also known as the afferent or induction phase, occurs after the first contact with the allergen, during which the chemical penetrates the stratum corneum, promoting the development of effector T cells (Ashikaga et al., 2018; Koppes et al., 2022). Second, the elicitation phase, also known as the efferent or challenge phase, occurs when the sensitized individual is re-exposed to the allergen, leading to clinical

manifestations (Kimber et al., 2018; Rustemeyer et al., 2021; Tanaka et al., 2020).

The prevalence of allergic contact dermatitis is as high as 20% in the general population (Thyssen et al., 2021). The epidemiology of ACD depends on exposure trends related to climate, occupation, technological development, and local regulations (Diepgen & Ofenloch, 2019; Silverberg et al., 2021). Recent studies conducted in several countries have shown a higher prevalence of ACD in children than in adults, with prevalence rates of 10.35% and 3.67%, respectively (Lunder et al., 2020). The incidence of ACD is more common in women due to more frequent exposure to cosmetics and household cleaning products (Warshaw et al., 2020). Epidemiological data from Indonesia show that 97% of 389 recorded skin disease cases were contact dermatitis, with 66.3% classified as irritant contact dermatitis (dermatitis kontak iritan, DKI) and 33.7% as ACD (Putri et al., 2022). Occupational exposure is the main risk factor for ACD, and 90% of occupational skin disorders worldwide are contact dermatitis, particularly ACD (Halkier-Sørensen et al., 2018). The most common contact allergens include nickel, cobalt, fragrance, chromium, p-phenylenediamine, methylchloroisothiazolinone/methylisothiazolinone, and colophonium (Uter et al., 2020).

Allergic contact dermatitis (ACD) can appear as acute, subacute, or chronic dermatitis (Tramontana et al., 2023). Acute ACD is typically characterized by papules and erythematous vesicles, which may become severe in some cases. Chronic ACD tends to present as erythematous and pruritic lesions that may indicate long-standing inflammation, such as lichenification, peeling, and fissuring. Common symptoms of ACD include itching and occasional soreness. Symptoms of irritant contact dermatitis include burning, itching, pain, and discomfort, particularly at the onset, whereas pruritus is more common in ACD (Patel & Nixon, 2022). The most common clinical presentation of ACD is eczema, which typically develops 5–7 days after first exposure to the allergen, while subsequent contact triggers a reaction within approximately 24–48 hours.

A thorough clinical evaluation of allergic contact dermatitis involves detailed anamnesis and physical examination (Ale & Lachapelle, 2023). Anamnesis focuses on exposure history, family atopy, and clinical findings based on the chronological course of the disease (O'Leary et al., 2021; Bennike et al., 2020). It should include information about the patient's occupation, hobbies, medications, topical cosmetics or medications used, and fabrics worn (Darlenski & Fluhr, 2019). The morphology and location of dermatitis are often the best predictors of the causative agent (Giménez-Arnau et al., 2022). Patch testing remains the gold standard for confirming diagnosis and should be performed in patients with suspected ACD and persistent symptoms (Koch et al., 2020). A positive patch test result for ACD demonstrates a crescendo phenomenon, where inflammation increases at 24–72 hours after exposure and

peaks at 72–96 hours even after removal of the test material (Mowad et al., 2018; Spiewak et al., 2019).

This case report describes one instance of allergic contact dermatitis caused by daily soap products containing sodium lauryl sulfate (SLS) and fragrance, confirmed by positive patch test results. While extensive literature documents ACD caused by cosmetics, personal care products, and industrial chemicals, systematic case reports focusing on household cleaning product-related ACD in occupational contexts remain comparatively limited, particularly in Southeast Asia. Most published case series emphasize personal care products rather than cleaning agents used in workplace settings. Furthermore, comprehensive patch testing using both standardized allergen series and the patient's actual work products is rarely reported, despite providing the most clinically relevant diagnostic information.

This case report contributes to the existing literature in several important ways: (1) it documents occupational ACD in a male office worker with substantial exposure to multiple cleaning products, a demographic underrepresented in cosmetic-related ACD literature; (2) it demonstrates systematic diagnostic evaluation using both standardized allergen series and patient-brought products, illustrating practical diagnostic approaches; (3) it identifies specific product formulations and their allergenic components through correlation of patch test results with product composition analysis; (4) it emphasizes occupational health implications and preventive strategies for workers with frequent cleaning product exposure; and (5) it provides regional data on cleaning product-related ACD from Indonesia, contributing to geographic diversity in the dermatological literature.

This case underscores the importance of recognizing occupational dermatoses in non-traditional high-risk occupations, the value of comprehensive patch testing methodology, and the need for workplace health and safety measures to prevent cleaning product-related ACD in vulnerable workers.

METHOD

This research employed a qualitative case report design to conduct an in-depth investigation of a single clinical presentation of Allergic Contact Dermatitis (ACD). The data population for this study consisted of all patients presenting with suspected contact dermatitis at the Skin and Venereology Polyclinic. From this population, a single data sample was selected: a 36-year-old male patient who presented with characteristic symptoms of hand dermatitis and a history of exposure to various soap and detergent products. The sampling technique used was purposive sampling, as the case was specifically chosen for its relevance to the research focus on ACD triggered by daily soap products, thereby providing a detailed and illustrative example.

The primary research instrument was a comprehensive patient assessment protocol, which included a detailed anamnesis (medical history), a

thorough physical examination of dermatological status, and a diagnostic patch test. The patch test was conducted using a finn chamber with both a standardized series of allergens and the patient's own products (e.g., dish soaps, hand soap, detergent), diluted to 10% in vaseline. Data analysis was performed descriptively by interpreting the clinical findings and the patch test reactions over multiple readings (at 48, 72, and 96 hours). The results were graded according to the International Contact Dermatitis Research Group (ICDRG) criteria, with the crescendo phenomenon (increasing reaction over time) being the key analytical technique for confirming a diagnosis of ACD over irritant contact dermatitis.

RESULTS AND DISCUSSION

CASE

A 36-year-old man domiciled in Ngawi Regency, East Java and works as *an office boy* (OB) 2904to the 2904Skin and Venerean Polyclinic of the Regional General Hospital (RSUD) Dr. Moewardi Surakarta with complaints of red, itchy, and peeling skin of the hands since 4 months ago. Complaints are felt after contact with dish soap. As an OB, every day the patient is in charge of washing the dishes. The patient washes dishes without using gloves. The patient checked himself at the Skin and Venerean Polyclinic of the Regional General Hospital (RSUD) Dr. Moewardi Surakarta and received oral medication in the form of methylprednisolone 8 mg once a day and cetirizine 10 mg twice a day. Patients also receive topical medications in the form of 0.05% clobetasol which is applied to lesions twice a day and atopiclair® lotion which is also applied twice a day. Patients are also advised to wear gloves while working. Then complaints were felt to be getting better.

One week before the patient is checked into the hospital, the patient washes clothes with laundry detergent without using gloves. Patients complain of cracked hands, peeling, itching, and pain. However, the patient has not received treatment for the complaint. After one week, the complaints were felt to be more aggravating and interfered with daily activities so the patient decided to check himself at the Skin and Venerean Polyclinic of the Regional General Hospital (RSUD) Dr. Moewardi Surakarta.

Based on the anamnesis 2904of the2904previous disease, the patient had experienced similar complaints one year earlier which was felt to be lost. The patient also has 2904 iln 2904 te atopi. The patient does not have 29042904hypertension, diabetes mellitus, or chronic disease. Family history of illness does not receive similar complaints, drug allergies, food allergies, atopy or asthma. The patient does not smoke and consumes alcohol.

Physical examination of the patient appeared to be mildly ill with vital signs within normal limits. The dermatological status in the region digiti I-V manus dekstra et sinistra appears to be erythematosa 2904 patches iln2904te2904 accompanied by squama on it, *xerotic skin* (+) and in the bilateral palmar region there is *xerotic skin* (+) **(Figure 1).** Based on the

anamnesis and physical examination, the differential diagnosis in this case is ACD due to everyday products such as dish soap and detergent, DKI, and atopic dermatitis.

Figure 1. Dermatological status. **(A-B)** regio digiti I-V bilateral manus appears discrete multiple erythematose patches Partially confluent accompanied by erosion, partly escroriated and squama firmly bounded

The patient was subjected to a patch test examination with the preparation of a tool using *a finn chamber*, hypoallergenic plaster, permanent markers, cotton soaked 2906with290670% water, standard paste test material and all products carried by the patient diluted by 10% using vaseline album (**Table 1).** The condition for the patch test is that the patient does not consume immunosuppressant drugs or systemic corticosteroids (2906iln2906te290629062906 <10 mg/day) at least 1 week before the test or in accordance with the half-life of the drug and is carried out on the upper back.

Table 1. Patient patch test2906 list

Yes	Allergen name	Reaction		
		48 hours	**72 hours**	**96 hours**
Standard allergens				
1.	*Mercaptobenzothiazole 2%*	-	-	-
2.	*Cobalt chloride 1%*	+/-	-	-
3.	*Para-phenyldiamine 0.1%*	-	-	-
4.	*Peruvian Balm 25%*	-	-	-
5.	*Benzocaine 5%*	-	-	-
6.	*Potassium Dichromate 0.5%*	-	-	-
7.	*Ethylenediamine 1%*	-	-	-
8.	*Benzophenone 3%*	IR	-	-
9.	*Colophony 20%*	-	-	-
10.	*S-Chloro-7-Iodine-8-Hydroxy Quinoline 5%*	IR	-	-
11.	Lanolin	-	-	-
12.	Nickel sulfate 5%	-	-	-
13.	Hydroquinone	+	+/-	-
14.	Quarterium	+	+	-
Patient-brought products				
15.	Sunlight® dish soap	+	+	+
16.	Super pell® mole soap	+	+/-	+/-
17.	Dish soap in the office	_	+/-	-
18.	Dish soap wow®	+	+	++
19.	Calmic® hand soap	+	+	++
20.	Liquid detergent so 2906iln®	+	+	+/-

Information:
(-) :negative
(+/-) : dubious reaction
(+) : weak positive (erythema, mild edema, non-vesicular papules)
(++) : strong positive (edema accompanied by the formation of vesicles)
(+++) : strong positive (bubble formed)
NT : not dripped
IR : irritation reaction

In the results of the paste, from 2907 the standard iln 2907 te 2907 (*mercaptobenzothiazole 2%; cobalt chloride 1%; para-phenyldiamine 0.1%; Peruvian balsam 25%; benzocaine 5%; 2907ILN2907te29072907 dichromate 0.5%; ethylenediamine 1%; benzophenone 3%; colophony 20%; S-chloro-7-iodine-8-hydroxy quinoline 5%;* lanolin, nickel sulfate 5%, hydroquinon, quarterium) and patient-brought products (Sunlight® dish soap; Super mop® soap; office dish soap; wow® dish soap; calmic® hand soap; liquid detergent so 2907 iln®) positive results were obtained on standard 2907ILN2907TE2907 ingredients namely hydroquinone and quarterium as well as several products brought by patients, namely Sunlight® dish soap; Super mop® soap; wow® dish soap; Calmic® hand soap, and liquid detergent so 2907iln®.

The first reading is carried out by slowly removing the chamber then the patient is asked to wait 20 minutes so that the skin contour 2907is2907as it used to be. The results of the reading after 48 hours (day 2) were obtained weak positive results in hydroquinone, quarterium, Sunlight® dish soap, Super pell® mop soap, wow® dish soap, calmic® hand soap, and 2907 so-iln® **liquid detergent (Figure 2**). The second reading was carried out after 72 hours (day 3) and the results were weak in the quarterium, Sunlight® dish soap, wow® dish soap, calmic® hand soap, and liquid detergent so 2907iln®. The third reading was carried out after 96 hours (day 4) and the results were positive for Sunlight® dish soap and strong positive results for wow® dish soap and calmic® hand soap. The assessment of the results of the patch test is based on 2907 the International 2907 Contact Dermatitis Research Group (ICDRG) iln t Grading. The conclusion of the sticker test results is that there is a crescendo reaction that leads to the diagnosis of ACD.

Patients are asked not to wet the back area, reduce excessive activity that causes sweating so that the patch test does not shift or come off, not scratch, sleep on your back or lean on your back and not take corticosteroids and antihistamines for 2 weeks. The results were read after 48 hours (day 2), 72 hours (day 3) and 96 hours (day 4) after the patch test was installed.

The results of the patch test examination on patients from liquid dish soap, Sunlight® dish soap, Super mop® soap, wow® dish soap, calmic® hand soap, and liquid detergent so 2907the® compounds suspected to be allergenic are surfactants and fragrances. The relevance of the results of the patch test with the patient's anamnesis was obtained probable results for SLS and *fragrance*.

Table 2. List of product compositions and potential allergenic ingredients in patients

Product	Composition	Potential allergens/ritans
Sunlight® dish soap	Surfactant 13%, *Builder (Sodium Tripolyphosphate), Acetate: Nitrile Triacetate, Ethylene Diamine Tetra Acetate, Silicate: 2908ILN2908Te, Citrate: Citric Acid, Lime*	Surfactant *Fragrance*
Super pell® mole soap	*Sodium Lauryl Ether Sulfate 1.5%, Secondary Alcohol Ethoxylate 1%.*	Surfactant
Dish soap wow®	*Sodium Alkylbenzene Sulfonate, Sodium Lauryl Ether Sulfate, Cocamidopropyl Betaine*	Surfactant
Calmic® hand soap	Alcohol 70%, *fragrance*	*Fragrance*
Liquid detergent so 2908iln®	Total surfactants & additives 25%, *Triclosan (antibacterial agent)*	Surfactant

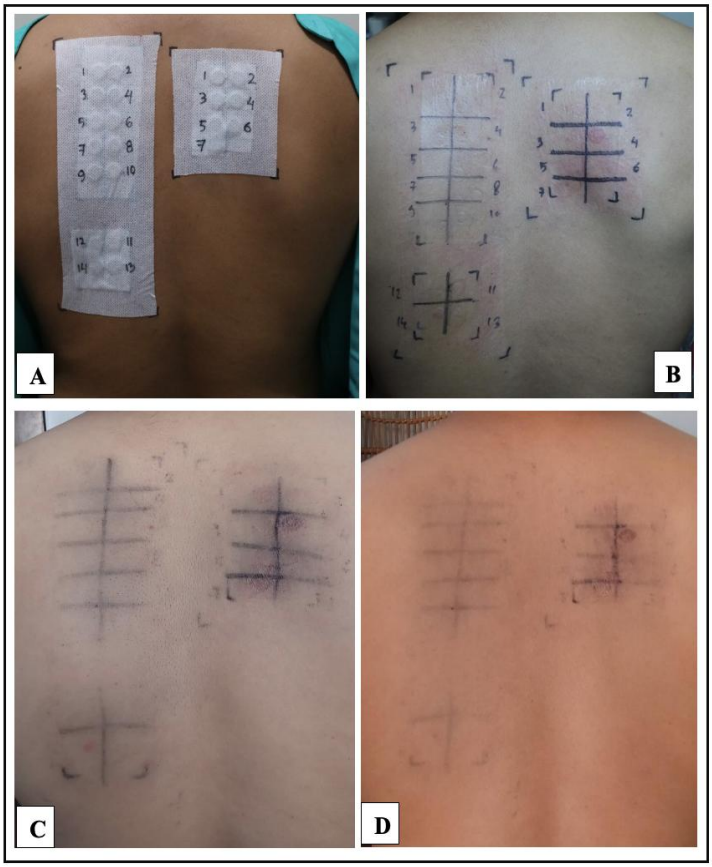

Figure 2. Sticky test results. (**A)** Documentation after installation of the patch test chamber (0th day). **(B)** Day 2 (48 hours) was positive for weak hydroquinone, quarterium, Sunlight® dish soap, Super pell® mop soap, wow® dish soap, calmic® hand soap, and socline® liquid detergent. **(C)** Day 3 (72 hours) positive weak in the quarterium, Sunlight® dish soap, wow® dish

soap, calmic® hand soap, and socline® liquid detergent. (D) Day 4 (96 hours) was positive for Sunlight® dish soap and positive for strong for wow® dish soap and calmic® hand soap.

Based on the anamnesis, physical examination and patch test, our patient was diagnosed with ACD because daily soap was suspected due to exposure to SLS and *fragrance* **(Table 2).** Patients were administered with oral cetirizine 10 mg once a day when itchy, and given topical corticosteroids, namely klobetasol propionate 0.05% applied 2 times a day (morning and evening) to the redness area and moisturizer in the form of urea cream 20% applied 2 times a day (morning and evening) to dry skin. Non-medical management is in the form of education to patients to avoid exposure to allergens.

Discussion

Allergic contact dermatitis (ACD) is a slow-type hypersensitivity reaction or type 4 hypersensitivity to exogenous antigens that induce an innate and adaptive immune response.[17] Allergic contact dermatitis is a multifactorial disease in which genetic and environmental factors play a role.[4] Allergic contact dermatitis is a T-cell-mediated skin inflammation caused by repeated skin exposure to hapten in sensitive individuals. The reaction to ACD consists of a sensitization phase and an elicitation phase.[1]

First, the sensitization phase is also referred to as the afferent phase or induction which includes the event after the first contact with the allergen, where the sensitization of the chemical penetrates the stratum corneum, encouraging the development of effector T cells. Langerhans cells are in the epidermis while langerin-dermal dendritic cells patrol the dermis. Once hapten-protein complexes occur, they migrate to the skin's lymph nodes and act as *antigen precenting cells* (APCs). In cutaneous lymph nodes, the primary naïve T cell APCs CD4+ and CD8+ present MHC cell surface molecular antigens (I or II). So that it triggers the differentiation and proliferation of CD8+ and CD4+ T cells into IFNγ-producing cytotoxic T cells and helper T cells (Th). These T cells then reside in the skin's lymph nodes as effector memory cells until the next exposure to the same allergen.[18] In the elytication phase , memory cells of the effector proliferate and subsequently migrate from the skin lymph nodes to the contact site of the allergen. This activation and migration of T cells is mediated by allergen-induced chemokin and cytokine production from the denditic cells of Langerhans cells, and keratinocytes. Activated T cell recruitment results in damage to epidermal tissue, such as the formation of vesicles and blisters, erythema, itching, and other signs of inflammation.[18] The patient in this case is suspected to have experienced an allergic elicitization phase to daily soap products because eczema eruptions appear after more than one use of the product.

Allergic contact dermatitis occurs most in young people and women due to more frequent exposure to cosmetic ingredients and household cleaning

products.[1] Household cleaning products are all products of natural or synthetic substances that are used to help with the cleaning process.[19] Some of the most commonly used cleaning agents are widely used disinfectants, *fragrances*, detergents, soaps, polishes, abrasives and other types of cleaning agents.[20] Preservatives and *fragrances* are the main allergens in household cleaning products with the highest content being *methylchloroisothiazolinone/ methylisothiazolinone* (MCI/MI), limonen and surfactants.[21] In this case, the patient was a 36-year-old man who worked as an *office boy* (OB).

Soap is one of the cleaning products that we often use every day. One of the compounds contained in soap is *sodium lauryl sulfate* (SLS), which is also known as *sodium dodecyl sulfate* (SDS) is a surfactant that has strong cleansing and degreasing abilities. These compounds cause damage to sensitive skin. *Sodium lauryl sulfate* impairs the barrier function of the stratum corneum. SLS stimulation can induce the infiltration of pro-inflammatory cytokines into the skin, where neutrophils will migrate to the epidermis and skin inflammation occurs. When the surface of the skin is stimulated by a chemical, there is a release of the pro-inflammatory cytokine interleukin (IL)-6. Interleukin-6 will promote the release of PGE2 and increase TNF expression which causes inflammatory reactions such as edema, erythema and itching.[22]

The prevalence of ACD due *to fragrance* in the general population is estimated to be 1.8% to 4.2%.[23] *Fragrance* includes a series of many compounds, generally synthetic. Fragrance can be contained da; am perfume, also contained in *cologne, eau de toilette*, and *aftershave*. They are also found in cosmetics (for skin, nail, hair, and eye care), toothpaste, sunscreen creams, and adult and children's cleaning products, including wet wipes and insect repellent. *Fragrance* can also be found in household products such as dish and clothing detergents, softeners, eco-friendly deodorants, candles, furniture polishes, and tableware. *Fragrance Mix I contains eugenol, isoeugenol, cinnamic alcohol, cinnamic aldehyde, amylcinnamaldehyde, geraniol,* and *hydroxytronellal, absolute oak moss.* Fragrance Mix II includes *lyral, citral, farnesol, citronellol, coumarin,* and *hexylcinnamaldehyde. Lyral* and *Balsam of Peru* are also tested on their own.[24]

Irritant reactions can be acute, for example after exposure to a single chemical that causes localized or chronic dermatitis, e.g. repeated cumulative exposures such as soap. Specific irritants such as iodophores, antibacterial soaps (chlorhexidine gluconate, chloroxylenol, triclosane) and surfactants exacerbate the incidence of contact dermatitis in patients with ACD.[25] patients in this case, from the results of the patch test examination, from Sunlight® dish soap, Super pell® mop soap, wow® dish soap, calmic® hand soap, and liquid detergent so cline® compounds suspected to be allergenic are surfactants and *fragrances.* Surfactant compounds suspected of being allergenic are *Sodium Lauryl Ether Sulfate* in Super Pell® mop soap and wow® dish soap, and *Sodium Alkylbenzene Sulfonate, Cocamidopropyl Betaine* in wow® dish soap

products. Calmic® hand soap contains 70% alcohol. The alcohol content in soap or handrub can cause pathophysiological changes in the skin such as protein denaturation in the stratum corneum, changes in intercellular lipid groups and impaired release of proinflammatory cytokines.[26] The relevance of the results of the patch test with the patient's anamnesis was obtained probable results for SLS and fragrance. Some substances with allergenic potential were successfully derived by comparing the composition and results of the paste. However, the findings have not yet determined which compounds are potentially allergenic and require further paste testing with each compound.

A common symptom of ACD is itching.[1] Allergic contact dermatitis (ACD) can present as acute, subacute, or chronic dermatitis. Acute allergic contact dermatitis (ACD) is most often characterized by papules and erythematous vesicles, and may appear in severe cases. In chronic ACD it tends to appear as erythematous and pruritus lesions that may indicate long-standing inflammatory stigmata, such as liquefiment, peeling, and fissure.[6] The case in this patient experienced a chronic erythematous phase characterized by erythematous patches on both fingers of the patient with infirm boundaries accompanied by squama and dry and itchy skin.

Patch *tests* are the gold standard for confirming diagnosis and should be done if there is a suspicion of ACD in patients with persistent symptoms.[14,15] A patch test can help determine the allergen to avoid future exposure to the allergen.[15] A sticker test examination can be used to establish the diagnosis of ACD as well as to differentiate between ACD and DKI.[27] The results of the patch test in Jakarta are characterized by the phenomenon of decrescendo, which is an inflammatory reaction that arises after exposure to the test material which then decreases within 24 hours after the irritant material is removed, while in ACD shows the crescendo phenomenon, which is an inflammatory reaction that tends to increase in 24-72 hours after exposure to the test material and reaches a peak at 72 to 96 hours even though the allergen has been removed.[28] patients in this case were examined to support a sticker test and the results of a crescendo reaction that led to the diagnosis of ACD.

Comparative diagnosis of ACD includes DKI and atopic dermatitis. The diagnosis of ACD can be complicated by bacterial superinfection, therefore bacterial cultures should be considered in cases with exudate, madidans and crustacean lesions.[1] A patch test inspection can be used to differentiate between ACD and DKI.[27] Atopic dermatitis is usually a clinical diagnosis given the classical distribution of lesions in each age group. The presence of related findings (e.g. keratosis pilaris) can facilitate diagnosis. A biopsy will show a pattern of eczema. In cases of childhood that is difficult to treat, *fluorescent enzyme immunoassays* or *skin prick testing* may be performed to detect immunoglobulin E (IgE) antibodies to specific allergens, which may or may not be clinically relevant exacerbation factors.[29] The Gospel of Jesus Christ

The goal of treatment of allergic contact dermatitis is to lower the inflammatory response triggered by type 4 hypersensitivity reactions.[30] The

main management of ACD is the identification of allergens and the avoidance of causative agents.[11] Regular use of emollients improves the function of the skin barrier and is an important part of the management of contact dermatitis. Topical corticosteroids have been shown to be effective for the treatment of contact dermatitis if allergens if the underlying ingredients have been avoided.[31] Localized acute ACD lesions can be treated with medium or high potency topical steroids, such as momethasone furoat 0.1% or clobetasol 0.05%. In areas with thinner skin (e.g. supple surfaces, eyelids, face, anogenital area), low-potency steroids such as desonid 0.05% can help and minimize the risk of skin atrophy.[3] If ACD involves a larger area of skin (more than 20%), systemic steroid therapy is often necessary. Antihistamines may be considered although they are generally not effective for ACD-related pruritus.[32] Patients in this case were given moderate topical corticosteroids in the form of clobetasol propionate 0.05% cream which was applied 2 times a day to the redness area and given a moisturizer in the form of urea 20% cream given 2 times a day. Non-medical management is in the form of education to patients to avoid exposure to allergens. The therapy provided is effective in improving patient complaints.

CONCLUSION

A 36-year-old male office boy presented with a 4-month history of red, itchy, and peeling skin on both hands, showing multiple erythematous patches, scaling, and xerosis on dermatological examination. Patch testing revealed a crescendo reaction, confirming allergic contact dermatitis (ACD) caused by exposure to sodium lauryl sulfate (SLS) and fragrance in daily soaps. The patient was treated with clobetasol propionate 0.05% cream twice daily, urea 20% cream twice daily, and advised to avoid allergen exposure, resulting in effective symptom improvement. Future research should investigate the prevalence and risk factors for cleaning product-related ACD in non-industrial occupations, along with effective preventive interventions in similar workplace contexts.

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