

Occupational Disease Casebook-Contact Dermatitis



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Introduction

Contact dermatitis is a common occupational disease caused by the skin contact with certain irritants or allergens in the course of work.

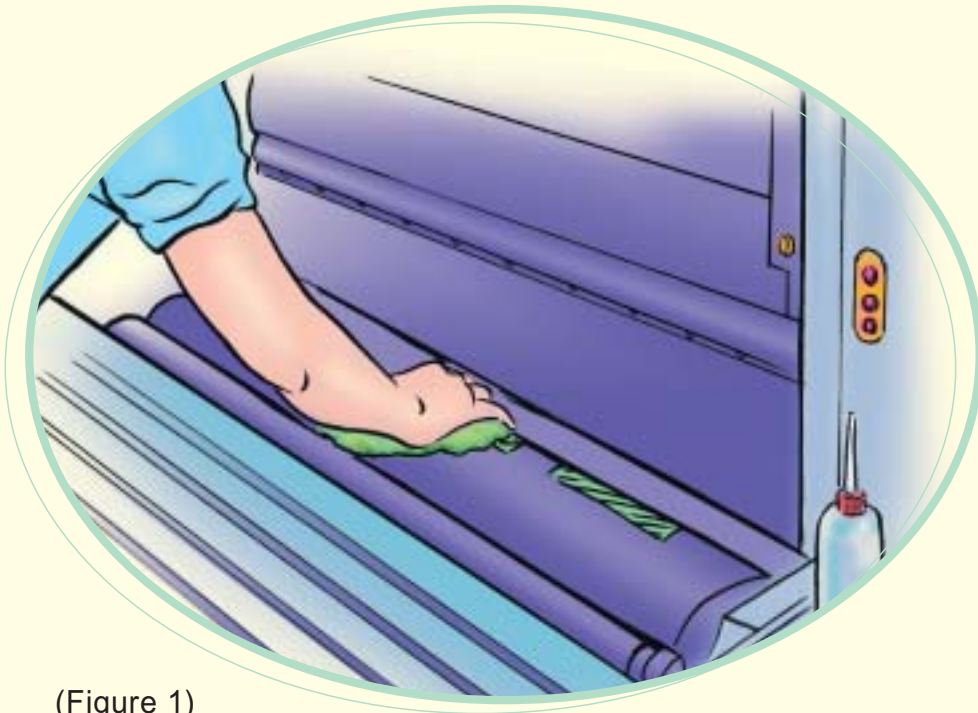
Contact dermatitis can be divided into two main categories: irritant dermatitis and allergic dermatitis. Their symptoms are very similar. Initially, the affected skin may become red, swollen and itchy. Small vesicles and ulceration may also appear. Later, the skin will gradually turn dry with peeling, lichenification and fissures, affecting our daily life and work.

The objective of this booklet is to illustrate, through four case studies, the causes of contact dermatitis and to give recommendations on specific preventive measures.

A Printing Technician

Case Summary

Jack was a printing technician. His daily job was to operate two printing machines for printing greeting cards and name cards. In the course of his work, his hands had frequent contacts with printing inks and various kinds of pigments (Figure 1). He used to removing grease stains on his hands with white petroleum.



(Figure 1)

A Printing Technician



(Figure 2)

One day, he found that the skin of his hands was red, itchy and swollen with vesicles (Figure 2). Later on, skin peeling, fissuring and bleeding also occurred. Jack therefore sought treatment from an occupational health clinic and was diagnosed to have irritant contact dermatitis.

Causes of the Illness

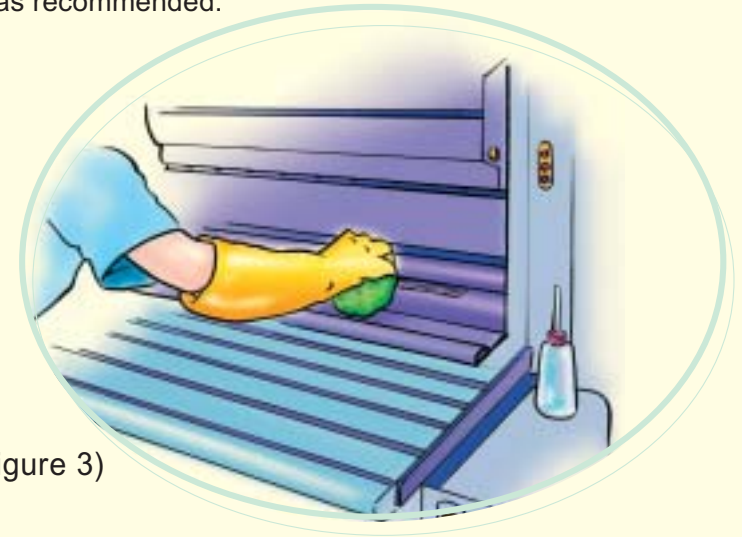
According to the doctor's analysis, Jack contracted irritant contact dermatitis because of the following reasons:

1. He did not take the precaution of wearing suitable gloves as specified on the labels of printing inks and pigments whilst handling the chemicals.
2. He used organic solvents, such as white petroleum, to remove stains on his hands, thus causing damage to the skin.

Preventive Measures

Cases of irritant contact dermatitis similar to Jack's can be prevented by taking the following measures:

1. Use chemicals that are safer and less irritating to the skin.
2. Read the labels and product descriptions of chemicals carefully. Note whether the chemicals may cause skin allergy or irritation and take appropriate preventive measures as recommended.



(Figure 3)

3. Wear suitable gloves (Figure 3) or resort to aids to avoid skin contact with the chemicals in use.
4. Use industrial hand cleansing agents to remove oil stains on the skin and apply moisturizing cream for skin protection afterwards.

Case Summary

Locke had been working in a hairdressing saloon for over two months. His daily job was to provide hair washing, perming and dyeing services for his clients (Figure 4). His hands often got wet and came into contact with hairdressing products because he never wore gloves at work.



(Figure 4)

(Figure 5)



Recently, Locke noticed redness, swelling, small vesicles, peeling and itchiness of the skin of his hands (Figure 5), which deteriorated every time he handled shampoos and colorants but improved after he had taken leave. He consulted a doctor who diagnosed his illness as irritant contact dermatitis.

Causes of the Illness

The doctor told Locke that he contracted dermatitis at work because:

1. his hands were in frequent contact with chemicals, such as shampoos, hair conditioners, perming lotions and colorants;
2. his hands often got wet; and
3. he did not wear suitable protective gloves.

Preventive Measures

Cases of irritant contact dermatitis similar to Locke's can be prevented by taking the following measures:

1. Read the labels of hairdressing chemicals carefully before procurement. Choose products that will not cause or cause minimal skin irritation or allergy.
2. Take appropriate preventive measures in accordance with the recommendations given in the product descriptions when using hairdressing chemicals.



(Figure 6)

3. Wear protective gloves, such as disposable gloves (Figure 6), to minimize direct contact with perming lotions and colorants. Barrier cream may also be used to protect the hands.
4. Take proper care of hands:
 - Wipe the hands dry as soon as possible after getting wet.
 - Wash hands quickly with mild cleansing agents after contacting hairdressing chemicals and apply moisturizing cream to protect the skin.

Case Summary

Oliver had been working in the trowel trades for more than a year. He was engaged in plastering, brick-laying and tiling works .



(Figure 8)

Half a year ago, redness, itchiness and peeling developed in the skin of his forearms (Figure 8).



(Figure 9)

Despite that he kept on consulting doctors, the skin condition fluctuated even after applying topical medications. Later on, the skin of his feet was also affected (Figure 9). On dry days, the skin of the inflicted areas fissured and was painful. His daily life was seriously affected. The doctor diagnosed that he had allergic contact dermatitis.

Causes of the Illness

According to the doctor's analysis, Oliver suffered from dermatitis because he was allergic to chromium in the cement. He had contact with the cement at work in the following situations:

1. He only wore a pair of cotton gloves at work. Sometimes he even handled the cement bare handed.
2. Occasionally, the cement was splattered into his shoes, so that his feet came into contact with the cement.
3. He did not wash off the cement on his body until after work.

Preventive Measures

This kind of contact dermatitis can be prevented by taking the following measures:

1. Avoid direct contact with cement and do not handle cement bare handed or with hands wearing only cotton gloves. Put on waterproof plastic gloves instead.
2. Wear shoes that suit operational needs (Figure 10).
3. Wear suitable working clothes to protect the skin from coming into contact with splattered cement.
4. Take proper care of the skin:
 - If cement is splashed onto the skin, wash it off quickly and apply moisturizing cream afterwards.



(Figure 10)

A Chef in a Chinese Restaurant

Case Summary

Warren was a chef mainly responsible for cooking Chinese food. He had to come into contact with a lot of food, ingredients and seasonings every day. Moreover, he had to clean the stoves with detergents. Hence, his hands often got wet (Figure 11).



(Figure 11)

After working for a few months, Warren developed redness, swelling and itchiness of the skin of his hands and small vesicles on both sides of his fingers. Later on, skin peeling, fissuring and bleeding (Figure 12) also occurred. The doctor diagnosed that he had irritant contact dermatitis.



(Figure 12)

A Chef in a Chinese Restaurant

Causes of the Illness

The causes of Warren's irritant contact dermatitis were as follows:

1. His hands often got wet at work.
2. In the course of food preparation, his hands had frequent contact with seasonings and ingredients (e.g. garlic, spring onion, onion and ginger that are irritant to the skin).
3. He did not wear suitable gloves when cleaning stoves with detergents.

Preventive Measures

Cases of dermatitis similar to Warren's can be prevented by taking the following measures:

1. Read the labels of cleansing agents carefully before procurement. Choose detergents that will not cause or cause minimal skin irritation or allergy.
2. Take appropriate preventive measures in accordance with the recommendations given in the product descriptions when using detergents.
3. Avoid direct contact with irritating substances:
 - Wear suitable gloves or resort to aids when handling food ingredients and seasonings (Figure 13).



(Figure 13)

- Wear suitable plastic gloves when cleaning stoves.

4. Take proper care of hands:

- Dry hands as soon as possible after getting wet.
- Wash hands quickly with mild cleansing agents after contacting with irritating ingredients and apply moisturizing cream afterwards.

Conclusion

Although this booklet only presents four cases from different industries, the causes of these cases and the respective preventive measures are also useful to employers and employees of other trades/industries for reference.

In fact, the prevention of contact dermatitis is based on four principles:

1. Read the labels of chemicals carefully before procurement. Choose chemicals that will not cause or cause minimal skin irritation or allergy.
2. Take appropriate preventive measures in accordance with the recommendations given in the product descriptions when using chemicals.
3. Avoid direct contact with irritants or allergens. Wear suitable personal protective equipment like gloves and aprons.
4. Pay attention to personal hygiene. Keep the skin clean and dry, and apply moisturizing cream to the skin.

Employers and employees can take appropriate preventive measures in accordance with the above principles to reduce the risk of employees contracting contact dermatitis. Occupational contact dermatitis is one of the prescribed occupational diseases under the Employees' Compensation Ordinance. If you suspect that you have contracted this disease or any other occupational disease, please call the Occupational Health Clinic of the Labour Department to make an appointment for consultation.

Kwun Tong Occupational Health clinic
Tel: 2343 7133
Fanling Occupational Health Clinic
Tel: 3543 5701