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Concise guidance: diagnosis, management and prevention of occupational contact dermatitis

Julia Smedley on behalf of the OHCEU and BOHRF Dermatitis guideline development groups*

ABSTRACT – Occupation is an important risk factor for contact dermatitis that presents in adulthood. Occupational contact dermatitis often has significant adverse effects on quality of life and the long-term prognosis is poor unless workplace exposures are addressed. The condition often presents to general practitioners, physicians or dermatologists who will be responsible for facilitating management of the workplace issues in the event that an occupational health service is not accessible. This concise guidance summarises three sets of guidance from the Occupational Health Clinical Effectiveness Unit, the British Occupational Health Research Foundation and the British Association of Dermatologists respectively. It is aimed at physicians in primary and secondary care, covering the clinical aspects of case management but also drawing attention to the important actions they should take to address the workplace issues, either in liaison with an occupational health provider or in the absence of occupational health input.

KEY WORDS: contact dermatitis, guidelines, occupational disease

Introduction

Contact dermatitis (CD) is common in the general population, with a point prevalence of hand dermatitis 9.7% and incidence 5.5–8.5/1,000 person years.[1,2] Among patients of working age, occupation can be an important risk factor; skin disease is the third most common occupational disease, with contact dermatitis accounting for 70–90% of all occupational skin disease. Although not life threatening, dermatitis can have a serious adverse impact on quality of life, daily function and relationships. It has important social implications for patients and their families, including a potentially serious threat to employment. The prognosis for occupational CD is better when the exposure of affected individuals to causative agents at work is reduced. Therefore, good medical management in this condition comprises both clinical treatment and careful attention to risk identification and control in the workplace.

Where an individual has occupational health (OH) provision through their employer, the occupational aspects of prevention and case management will be coordinated by OH professionals. However, OH services are not provided under the NHS, and only a third of employees in the UK have access to them through their employers. Therefore for most patients, their general practitioners, physicians and dermatologists will be responsible for ensuring that the occupational risks are identified and managed alongside the clinical treatment, in the absence of specialised OH advice.

Aims of the guideline

This guideline aims to provide physicians who work in primary and secondary medical care with a standardised approach to managing CD in patients of working age. The document summarises three key sets of recently published or updated guidance (the source guidelines) from the Occupational Health Clinical Effectiveness Unit (OHCEU),[3] the British Occupational Health Research Foundation (BOHRF),[4] and the British Association of Dermatologists (BAD).[5] It covers both the clinical and the occupational aspects of case management, with a focus on the following areas:

- diagnosis and investigation of CD
- clinical management of cases of occupational CD
- management of the occupational aspects including facilitating exposure control, adjustments at work, and primary and secondary prevention.

The source guidelines have been produced by various multidisciplinary guideline development groups (GDGs). All have taken an evidence-based approach, using standardised scoring systems for the assessment of quality and grading of recommendations. The occupational guidelines (from OHCEU and BOHRF) have used the Scottish Intercollegiate Guidelines Network (SIGN) methodology, either alone or in combination with the Royal College of General Practitioners (RCGP) three star system. Importantly, the GDGs included patient representation. Please refer to the full texts of the source guidelines for a complete description of methodology and the membership of the GDGs. The recommendations in this concise guideline have been graded using SIGN categories.

Julia Smedley, lead consultant occupational physician (honorary senior lecturer), Southampton University Hospital NHS Trust, Southampton; dermatitis guideline leader, Occupational Health Clinical Effectiveness Unit; member of dermatitis guideline development group, British Occupational Health Research Foundation;

Series editors: Lynne Turner-Stokes and Bernard Higgens

*For membership of the guideline development groups please see the full guidelines[3–5]

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The guidelines

Recommendation	Grade

A Recommendations for all patients

When an adult of working age presents with clinical features of contact dermatitis (CD), the physician should:

1. **Take a full occupational history, (see Box 1) asking the patient about:** — C
   - their job
   - the materials with which they work
   - the location of the rash
   - any temporal relationship with work.
2. **Arrange for diagnosis of occupational CD to be confirmed objectively by patch tests and/or prick tests in a specialist contact dermatitis clinic.** — B
3. **Treat established symptoms with topical steroids, soap substitutes and emollients.** — C
4. **Advise patients of their increased risk from exposure to irritants and sensitising agents at work, and counsel them to:** — C
   - avoid exposure or protect their skin with suitable gloves
   - use soap substitutes and emollients during and after work.
5. **Consider advising temporary adjustments to duties (or brief absence from work) to facilitate recovery if a patient's CD is severe and deteriorates because of work.** — GPP
6. **Refer patients with steroid-resistant CD to a dermatologist for consideration of second-line treatments.** — GPP
7. **Refer patients with occupational CD to a physician who has expertise in occupational skin disease for advice about workplace adjustments and liaison with their employer.** — GPP

B Recommendations if there is no access to occupational health (OH) advice

The physician should contact the patient's employer to: — GPP

- alert them to the diagnosis of work-related CD
- remind them of their responsibility to notify the Health and Safety Executive, if a new case
- give advice about programmes to remove or reduce exposure to the causative agents(s).

Advice should include the following:

1. **Appropriate gloves and cotton liners should be provided where the risk of occupational CD cannot be eliminated.** — A
2. **After-work (conditioning) creams should be available in the workplace and workers should be encouraged to use them properly.** — B
3. **The use of pre-work (barrier) creams should not be promoted, as they are not generally effective as a preventive measure.** — A
4. **Workers who are at risk of CD should be provided with appropriate education about:** — GPP
   - dermatitis
   - the principles of good hand hygiene
   - the use of gloves, pre-work creams and conditioning creams (emollients).

GPP = Good Practice Point.

continued

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The guidelines *continued*

C Recommendations if the patient works in healthcare

The physician should give the following specific advice:

1	**Skin affected by CD is more likely to become colonised with bacteria, and the risk is higher with acute severe lesions. Extra care must be taken to avoid passing bacteria to other staff and patients.**	C
2	**Alcohol rubs should be used at work where appropriate for hand decontamination instead of a full hand wash.**	B
3	**Healthcare workers with acute or severe CD should be restricted temporarily from contact with patients who are at high risk from hospital-acquired infection, until skin lesions are no longer severe or acute.**	GPP
4	**Healthcare workers may be able to continue with clinical work provided:** • they are able to follow normal infection control requirements • they have not been implicated in the transmission of infection to a patient • the dermatitis does not deteriorate as a result of clinical work.	GPP
5	**If CD deteriorates as a result of clinical work, temporary adjustments to duties should be made to facilitate recovery.**	GPP

GPP = Good Practice Point.

Clinical background

Contact dermatitis is an inflammatory disorder of the skin. The key clinical features are acute erythema and vesiculation; while the chronic phase is characterised by dryness of the skin with thickening (lichenification), cracking and fissuring. The rash is most commonly distributed on exposed areas of skin – in particular the hands and face. Aetiology is either irritant or allergic. Irritant contact dermatitis (ICD) is caused by a direct toxic effect on the skin, most commonly due to irritant chemicals and wet work that disrupt the skin's barrier function. Allergic contact dermatitis (ACD) is a delayed type IV (T cell mediated) immune response to specific sensitising agents, including small molecular weight chemicals and naturally occurring proteins.

The prognosis of occupational CD varies widely; similar proportions of patients report either improvement or ongoing symptoms (up to 89% in some series). A significant number (up to 10%) have persistent CD in the very long-term despite removal from exposure. Loss of job or complete change of employment because of dermatitis is common, and this can lead to financial impairment for the individual and their family. However, most patients manage to continue working in some capacity.

Occupational CD is notifiable to the Health and Safety Executive under the Reporting of Incidents, Diseases, and Dangerous Occurrences Regulations (RIDDOR). The employer is responsible for reporting work-related CD when the diagnosis has been confirmed by a doctor or other health professional. Therefore, physicians have an important role in alerting a patient's employer if they think that a new case of CD has been caused by work.

Dermatitis is a prescribed disease for the purpose of Industrial Injuries Disablement Benefit (IIDB), if the patient has been exposed to chromic acid, chromates or dichromates, or any external agent in the workplace (including heat and friction) that can cause irritation of the skin. A patient would have to be deemed more than 14% disabled to qualify for benefit. Physicians should be aware of IIDB prescription, and should direct patients with severe occupational CD to seek further advice from the Department of Work and Pensions (www.direct.gov.uk/en/disabledpeople/financialsupport/otherbenefitsandsupport/dg_10016183).

Barriers to implementation

The main potential barrier to implementing these guidelines is the achievement of effective liaison between doctors in primary or secondary care and the employer. With good communication, the care pathway can be highly effective. It is important to engage the patient positively in the process of liaison with their employer, to address concerns about job security openly, and to ensure that they have given consent for treating clinicians to share limited medical information in confidence. It is advisable to share the diagnosis of occupational CD with the employer in order to ensure completion of statutory reporting and planning of appropriate risk management strategies for the patient and their employed colleagues. Where there is access to an OH service

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Box 1. Points for specific inquiry when taking an occupational history.

High risk jobs	Causal exposures
Agricultural workers	Acrylics
Beauticians	Alcohols
Chemical workers	Chromium and chromates
Cleaners	Cobalt
Construction workers	Cosmetics and fragrances
Cooks and caterers	Cutting oils and coolants
Electronics workers	Degreasers
Hairdressers	Disinfectants
Health and social care workers	Epoxy resins
Machine operators	Nickel
Mechanics	Petroleum products
Metal workers	Plants
Vehicle assemblers	Preservatives
	Resins
	Soaps and cleaners
	Solvents
	Wet work

it is easier to protect the confidentiality of medical information. However, in the absence of an OH contact, doctors should aim to communicate, with the patient's consent, with their line manager or the employer's human resources adviser.

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Address for correspondence: Dr J Smedley, Occupational Health Department, Residence Block 4, MP100, Southampton SO16 6YD. Email: julia.smedley@suht.swest.nhs.uk

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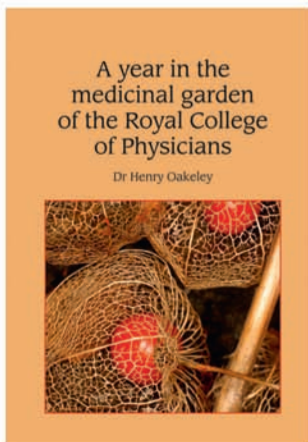

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