Read Item - Contact Dermatitis

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Abstract: Doctors' resources on contact dermatitis

Key Points

Contact dermatitis of the scalp may present as an acute, sub-acute or chronic dermatitis of the scalp that sometimes spreads to adjacent areas. A directed history and patch testing can usually establish the diagnosis. Light testing with a monochromator and a solar simulator can performed if a photodermatitis is suspected

Definition
Contact dermatitis is an eczematous dermatitis, caused by an external agent.

Aetiology and Pathogenesis
That external agent may be an irritant or an allergen. Irritants are abrasive substances with the potential to produce a dermatitis in everybody, while allergens will only produce a dermatitis in those people who are sensitised to that substance and who mount an immunological reaction to it whenever it is encountered.

The scalp is generally resistant to irritants because of its rapid epidermal turnover time and the thick epidermis and in particular the thick stratum corneum. The commonest causes of irritation are overuse of bleaching preparations, frequent blow drying and thioglycolates used in permanent waving (to disrupt the disulfide bonds within the hair keratins to allow remodelling of the hair).

Contact dermatitis is more common than irritant dermatitis although the scalp is also relatively resistant to allergens. The initial sensitization may occur on the scalp or at distant sites. The major allergens are hair dyes (table 12.10), bleaches, permanent wave solutions and hair creams.

Clinical features
The scalp margins tend to be worst affected. Allergy can also occur to hair nets, hat bands or wigs, while an allergy to shampoo is very rare .Contact dermatitis is occasionally induced therapeutically with DNCB or DCP in the treatment of alopecia areata, however it is rare to come into contact with these substances out of the therapeutic situation.

Contact dermatitis presents with an acute, sub-acute or chronic eczema that may be localised to the scalp and adjacent areas, or spread to involve other parts of the head and neck. Peri-orbital oedema may occur and mimic dermatomyositis or angio-oedema.

Investigation
Patch-testing to a battery of known chemical antigens (table 12.10) will usually diagnose an allergic contact dermatitis, and the patient should be advised to thereafter avoid all known allergens. Irritant contact dermatitis may not show up on patch testing, but may be obvious on history. A usage test with a suspected irritant may be indicated in difficult cases.

Prognosis
If the allergens can be successfully avoided the prognosis for contact allergic dermatitis is excellent, however many allergens are ubiquitous, making avoidance difficult .

Treatment
The dermatitis is treated with topical steroids. In severe cases oral prednisolone can be used. Irritation of the scalp can be minimised by using a mild shampoo, and avoiding all

hairdressing procedures for at least a month following clinical recovery.

Table 12.10- Important Causes Of Contact Allergic Dermatitis Of The Scalp

Substance	Allergen
HAIR DYES:	
Vegetable dyes-	chamomile
Metallic dyes-	nickel or chromium
Colour rinses-	o-nitroparaphenylenediamine
Permanent dyes-	phenylenediamine
HAIR BLEACHES	
ammonium persulphate	
PERMANENT WAVE SOLUTIONS	
thioglycolates	
HAIR STRAIGHTENERS	
thioglycolates	
DEPILATORIES	
thioglycolates	
MEN'S HAIR CREAM	
lanolin, perfume or parabens	
SHAVING CREAM	
perfumes	
HAIR NETS	
nylon or elastic	
HAT-BANDS	
leather (chromate) or colophony	
WIGS	
adhesives	