ABC of 1 to 7

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PAEDIATRIC DERMATOLOGY

Atopic eczema

Atopic eczema affects about 5% of the population. Some 70% of patients have a family history of atopy, shown by eczema, asthma, or hay fever. Atopic eczema is characterised by itching and red vesicular patches with a marked predilection for the face and the flexures. A remission often occurs between 2 and 4 years but may be shortlived, and recurrence in childhood may be severe and cause gradual lichenification of the skin with greater involvement of the hands and feet. Atopic children have a lower threshold to pruritic stimuli, and some children are worse during the cold weather and others when it is hot and humid. Woollen clothing also irritates atopic skin. Changing the diet does not help unless there is clear evidence of a specific food allergy.

In infants and small children the itching, the anxiety caused by it, and the social stigma of atopic eczema allow little opportunity for experimentation with unpleasant medications of uncertain effect. Acute eczema, which is nearly always secondarily infected, should be treated with a potent topical steroid-antibiotic combination and a systemic antibiotic. Often there are no obvious signs of infection. When the acute phase has passed, usually within 10 days, a weaker topical steroid without antibiotic is used. Patients should be advised to avoid soap and to use lubricants which help to moisten and lubricate the skin (for example aqueous cream). These are best applied to wet skin at the end of the bath. Pruritus may also be lessened by adding a processed oatmeal, Aveeno Oilated (half a cup per half bath of tepid water). Nocturnal itching can be diminished with an antihistamine, such as trimeprazine tartrate or hydroxyzine hydrochloride.

Eczema herpeticum

Herpes simplex infection, often primary, may complicate active or resolving atopic eczema. Kaposi's varicelliform eruption is a rapidly forming vesicular eruption which occurs mainly on abnormal skin but can become generalised. Fever and lymphadenopathy are usually present and there may be ocular and neurological complications. Patients should be isolated and receive antibiotics to prevent secondary bacterial infection. Steroids, both topical and systemic, should be avoided though pre-existing systemic steroid treatment for eczema should not be stopped suddenly.

Impetigo contagiosa

Impetigo contagiosa is an infectious superficial infection usually due, in temperate climates, to the staphylococcus or to mixed invasion by streptococci and staphylococci. In infants it can cause severe illness but in adults it is usually trivial. It often develops as a complication of a skin condition, especially eczema, but also commonly accompanies pediculosis or scabies. In the common variety superficial thin-roofed lakes of pus form on the face, hands, or knees and evolve rapidly into raw oozing areas which dry, leaving golden crusts. In the bullous variety large thick-walled blisters appear. The contents are initially clear but later purulent. The crusts should be removed gently by soaking with saline solution. The raw areas are then treated with a thin smear of 3% chlortetracycline ointment applied four times daily, and an oral antibiotic is given. The child should stay at home until the eruption has cleared.

Seborrhoeic dermatitis

Seborrhoeic eczema is so called because it may occur in sites of increased sebaceous activity, the face, neck, chest, and back. Seborrhoea, however, or an abnormality of the sebaceous glands is not considered a feature of the condition. It occurs commonly in the first three months of life as an erythematous scaly eruption on the scalp and face, but any of the body folds may be affected, including the neck, axillae, and groins. There is no itching but secondary infection is common, particularly with *Candida*. In some children atopic eczema may follow seborrhoeic dermatitis, but the latter is not thought to be due to atopy.

Pityriasis alba

Pityriasis alba is a chronic eczema, which occurs predominantly in children as rounded or oval hypopigmented mildly scaly patches usually on the face but occasionally on the upper arms and back. It may be associated with atopic eczema or may occur alone. The patches are often multiple, and initial erythema is followed by hypopigmentation, which prompts the parents to seek advice. The eruption is self-limiting but may last two or three years. The scaling may be reduced by a bland cream and any inflammation with a weak topical steroid.

Napkin dermatitis (contact irritant type)

Neonatal skin is thinner than adult skin, has less eccrine and sebaceous gland secretions, and shows a depressed reactivity to contact allergens. It is more susceptible to external irritants and bacterial infection, and these combine with other factors to produce a contact dermatitis.

Prolonged contact with urine or faeces, maceration of skin induced by wet napkins and waterproof pants, and secondary infection with *Candida albicans* lead to an irritant dermatitis. Urea-splitting bacteria which release ammonia are encouraged by the warm, wet environment produced by impervious clothing. The dermatitis appears as a confluent erythema at sites closest to the napkin, usually with sparing of the folds, and readily becomes secondarily infected, producing pustules and erosions. In boys inflammation of the urinary meatus often occurs and may cause dysuria and urinary retention.

Napkin dermatitis is managed by keeping the area clean and dry and avoiding occlusive dressings. Plastic or rubber pants should not be used except for important occasions. Disposable napkins are preferable to those

which require plastic overpants, though some disposable napkins also have an outer plastic lining. Towelling napkins are best if thoroughly washed, rinsed and sterilised. A mild detergent is advisable and the rinse cycle of a washing machine needs to be completed twice. The napkins can be sterilised by soaking them in a chlorinated isocyanurate solution. Napkins must be changed often. Regular compresses of saline solution (one level teaspoonful of salt in a pint of water) can be applied if the dermatitis is acute and exudative, or the affected area can be exposed for two or three days. In the past ointments have been avoided for acute weeping dermatoses but they are as effective as creams when used in similar concentrations. A 1% hydrocortisone preparation is used three or four times daily for a week, but a more potent steroid such as triamcinolone may be necessary for severe dermatitis. Strong fluorinated steroids should be used for only a week. Secondary bacterial infection is treated with both topical and oral antibiotics. Similarly monilial infection is treated by topical nystatin, and oral nystatin is also given to clear the intestinal reservoir of yeast. When the skin has recovered a barrier preparation such as zinc and castor oil ointment is applied with each nappy change to prevent recurrence.

“Lick eczema”

The site of a contact irritant dermatitis varies according to the cause. A reaction to a bubble bath, antiseptic agent, or tar sulphur soap may cause a widespread eruption, although the rash is often most prominent on the cheeks, neck, external surfaces of the limbs, and the buttocks. Lip licking or thumb sucking often causes a reaction due to saliva. The child and parents do not recognise the cause and notice a spreading irritating perioral eruption with fissuring. A mild steroid for a few days and then liberal applications of petroleum jelly help to clear the eruption. The eruption disappears when the child is persuaded to stop the habit.

Warts

Human warts are caused by a papovavirus, to which children aged 6 to 12 years are particularly prone; 65% resolve within two years of their onset. Warts may occur anywhere on the body though most occur on the hands and feet. The verrucous mass will often show multiple thrombosed capillary loops which resemble black dots. Warts are destroyed by physical or chemical methods. The adage that the best way to manage warts is to let them manage themselves still seems appropriate. When treatment is necessary simple measures such as covering the lesion with a waterproof adhesive bandage changed daily should be tried initially. The next measure is to pare the surface of the wart with an emery board or pumice stone and apply a paint of 10-20% podophyllin in tincture of benzoic compound daily for two to six weeks. A little petroleum jelly smeared on the normal skin around the wart will protect it from any irritant effect. If these methods fail the wart may be frozen with liquid nitrogen as it avoids the need for local anaesthetic and does not produce the painful scar that often results from diathermy cautery or excision.

Molluscum contagiosum

Molluscum contagiosum is caused by a pox virus and can spread rapidly. Multiple lesions are common in young children between the ages of 2 and 5 years and tend to occur especially on the face and trunk. The typical lesion is a dome-shaped flesh-coloured umbilicated papule which releases a cheesy white material when pierced and expressed. Molluscum contagiosum can resolve spontaneously. The lesions may be readily destroyed by piercing with a sharpened orange stick dipped in 10% podophyllin in industrial methylated spirit. Other equally effective measures include gentle curettage and cryotherapy.

Pediculosis capitis

The eggshaped capsules (nits) and lice of pediculosis capitis infect the hair of the head and eyelashes and there may be secondary impetigo of the scalp.

There are several effective treatments. Gammabenzene hexachloride 1% in a shampoo base (Quellada PC Application) is applied to wet hair and rubbed in vigorously to produce a generous lather. The application is left on for four or five minutes and the hair then rinsed thoroughly. While the hair is still wet it is combed with a fine-toothed metal comb to remove dead lice and nits. One application is usually enough. Malathion, an organophosphorus compound, also available as a 1% cream shampoo, is less irritant to the skin than gammabenzene hydrochloride, and has a marked residual action on the hair, which is a further advantage. It is effective against certain strains of "superlice" resistant to other conventional therapy. Malathion is inflammable and poisonous and should not be allowed to touch the eyes. Carbaryl lotion 0.5% is also effective against head lice. Children should be persuaded to avoid sharing each other's hats, caps, brushes, or combs and encouraged to have their hair washed frequently.

Scabies

Scabies is caused by the ubiquitous mite *Sarcoptes scabiei* and the typical eruption consists of pruritic papules, vesicles, and burrows. The papules result from invasion of the larval stages of the parasite, the vesicles from host sensitisation, and the burrow marks the site of the adult female mite where it has dug into the horny layer of the epidermis. In adults and older children the eruption tends to favour the fingerwebs, flexor aspects of the wrists, axillae, and the genitalia. In infants and young children the distribution may include the palms and soles, the head, face, and neck, and burrows may be absent. Furthermore, bullae, which are uncommon in the adult, may occur in children.

Treatment consists of two topical applications of 1% gammabenzene hexachloride to all areas of the body, except the face and neck, with 24 hours between applications. All people occupying the same accommodation and other close contacts should be treated even if they do not show overt evidence of scabies. At the end of treatment intimate articles of clothing (underwear, pyjamas, sheets, and pillowcase) should be laundered and ironed. Even after adequate treatment pruritus may persist but this usually responds to 10% crotamiton cream used for a week or two. If this appears unsuccessful reinfection or an alternative cause should be considered.

Fungal infection

Trichophyton tonsurans causes a diffuse hair loss with broken hairs. *Microsporum canis* or *Trichophyton mentagrophytes* may cause an acutely inflamed pustular mass containing few hairs—kerion. For confirmation of a fungal lesion of the skin, scales are obtained from the border of a lesion. Hairs infected with a microsporum species will fluoresce green when examined under a Wood's (long-wave UVL) lamp. In infections of the hair and nails a systemic antifungal agent, griseofulvin, is the treatment of choice, whereas for skin infections alone a topical antifungal agent is usually adequate. In the latter group the imidazole derivatives, clotrimazole and miconazole, have superseded the well-tried though cosmetically less acceptable benzoic acid compound (Whitfield's ointment) and Castellani's paint.

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