Current Practice

CHILD CARE IN GENERAL PRACTICE

Skin Conditions of Infancy and Childhood—Part II: Children Over 1 Year of Age

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In the first part of this article printed in last week's *B.M.J.* (p. 171) I discussed the skin conditions that are common in children who are less than a year old. This week's article is concerned with the skin conditions found in children over this age.

The Eczemas

Seborrhoeic eczema becomes increasingly uncommon after the age of 1 year, but atopic eczema becomes a little more common. Up to the age of approximately 3 years atopic eczema tends to affect the dorsal surfaces of the hands and wrists, the front of the ankles, and the dorsal surfaces of the feet rather than the

FIG. 1.—Typical seborrhoeic eczema of the napkin area which has been aggravated—but not caused by—ammoniacal urine.

flexural aspects of the limbs. After the age of 3, however, the elbow and knee flexures become involved and in older children the condition tends to be predominantly flexural ("flexural eczema"). Asthmatic bronchitis and, later, true asthma and also hay fever are frequently associated. It is uncommon to find a child with exacerbations both of eczema and asthma occurring at the same time. Usually when one part of the syndrome flares the other diminishes.

It is very important—and often difficult—in the toddler to control scratching and resultant secondary infection. The occlusive Coltapaste and Cortacream bandages mentioned in Part I of this article are exceedingly useful for this purpose since they can be left on for periods of from three to five days. For minor patches of eczema that do not require occlusion the local steroid preparations applied twice daily are highly efficient

and not messy to use, but when lichenification occurs a tar preparation is usually better. Neutrogena or Sevana soap may be used for cleansing, thus avoiding the alkalinity of the ordinary toilet soaps. The prognosis for the atopic child is poor. The condition is difficult to manage in the home where parents are worried and anxious, and if these children can be admitted to hospital for short periods of a week or two at a time one can do much to relieve the mother's burden.

The very common seborrhoeic eczema of the young baby (Fig. 1) is still seen up to the age of 18 to 24 months, but rarely after this. After the age of 1 year napkin dermatitis is usually seen only in the mentally or physically defective child.

Infections and Infestations

These are much more common in this age group than in any other. Impetigo is particularly a disease of the toddler and is often found complicating scabies or pediculosis capitis. The treatment is the same as that for the baby except that systemic antibiotics are very seldom indicated in the older child. It is again emphasized that one is simply wasting time if one treats scabies or pediculosis in the patient without looking for other infected members of the household. Should any brothers or sisters of the patient be at school then one can employ the school medical service to help eradicate these infestations from the family.

Papular Urticaria

The majority of dermatologists now accept that most cases of papular urticaria (Fig. 2) are due to sensitivity on the part of the child to the bites of fleas of domestic pets such as cats, dogs, birds, and—on the farm—cattle and sheep. It is not known why adults do not develop papular urticaria, and why, in fact, sensitivity is limited to the child.

The condition is much more common in the spring of each year and treatment should be directed at the eradication of fleas, not only from the pets, but particularly from the environment. Fleas are host-specific. They do not live on the animal host but rather on soft furnishings, cracks between floor boards, in carpets, and so on, and leave this environment only to feed. Feeding time is minimal; the frequency varies with the environmental temperature, being much greater in the summer than in the winter and more frequent in a warm room than in a cold one. Dicophane (D.D.T.) dusting powder or other suitable insecticide should be applied energetically to the soft furnishings and floor boards in the home and, for good measure, also to the animals. It is obviously unnecessary to treat the child in this way.

Unfortunately, at the moment, we do not have available skin tests which would allow us to identify the appropriate flea,

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and therefore we have no method of knowing whether the child is sensitive to dog, cat, or other flea, should it happen that the child is exposed to more than one domestic pet. In practice the real difficulty lies in explaining all this to the mother, who is usually adamant that "there are no fleas in my house," but the results of treatment are so good that five or 10 minutes' careful explanation are well repaid.

FIG. 2.—Papular urticaria. Children suffering from this disorder are frequently fretful and bad tempered.

Ringworm

Since the opportunities for infection by ringworm fungi depend on contact between child and animal or, in the case of human ringworm, another child, this is more common in the older child and particularly in the child who is already at school. The microsporum infections have been almost completely eradicated from the British Isles. *Trichophyton tonsurans* infections, which might have proved troublesome had the earlier outbreaks not

been tackled energetically, are rarely seen to-day. This success has been brought about by an increased awareness of the contagiousness of scalp ringworm, the importance of the symptomless carrier, the active efforts of the school medical service throughout Great Britain and their collaboration with dermatologists, and, finally, the introduction of the new anti-fungus antibiotic griseofulvin.

Should a family doctor suspect that a child has ringworm of either scalp or body then his first duty lies in identifying the fungus. This is important, since every effort must be made to trace the source of infection and unless one knows what the fungus is one cannot hope to do this. Should *Microsporum audouinii* or *Trichophyton tonsurans* be isolated then one's efforts are directed at finding human contacts, since these fungi do not infect animals.

If it is the former, routine examination of all children in the home or at school who have been in contact with the patient should be carried out using Wood's light. The dermatological clinics will deal with the family contacts and the school medical service with the school contacts. Since *Trichophyton tonsurans* infections of the scalp do not fluoresce under Wood's light the contacts should be examined, using the hairbrush diagnostic technique elaborated by Mackenzie (1963). It is easier and much more efficient to look for fungi on a hairbrush which a child has used for a few days than to try to find fungus from scales or hairs taken from the child's scalp.

Should *Microsporum canis* be isolated then one knows that the child acquired the infection from a dog or a cat, which must be found and either treated or destroyed. These infections cause fluorescence in the cat or dog hair just as they do in the human, and animals can easily be examined under Wood's light. Should *Trichophyton verrucosum* or *Trichophyton mentagrophytes* be found then one assumes that the infection was acquired from cattle or mice (including pet white mice), respectively. Regrettably there is no practical method of

treating an infected cow, but we can certainly dispose of white mice.

The treatment for all these ringworm infections is with griseofulvin, which should be started without delay except, perhaps, in *Trichophyton verrucosum* infections of more than two weeks' duration, where little good will result from the use of the drug. It is given by mouth as Grisovin-FP (125 mg.) or Fulcin Forte (125 mg.) one tablet three times daily for the average school-age child. The duration of treatment depends on the part of the body affected, a minimum of six weeks being required for the scalp and three weeks for the skin of the neck.

It is obviously better for cases of ringworm and suspected ringworm to be referred to dermatological clinics when possible, but should this not be convenient then scales from the advancing edge of the lesion or loose hairs epilated from the affected areas and wrapped in a single sheet of folded paper can be sent by the practitioner to any one of several mycological laboratories which are willing to examine samples transmitted by post.¹

Alopecia Areata

This is a little more common in the older child and has always to be differentiated from ringworm. Such differentiation is not difficult because the affected area is completely bald, but if there is any doubt then hairs from the margin of the patch should be sent to the mycological laboratory. If the bald areas are centred on the scalp margins then one should give a guarded prognosis, since the majority of cases of total and universal alopecia start in this fashion. In older children the presence of a previous history of the condition is also a pointer towards an unfortunate outcome. Non-marginal patches of alopecia areata in children in whom there is no family history of the disorder invariably clear spontaneously, but the hair may take up to nine months to regrow. Recurrence in the distant future is probably more common than has been realized. A single injection of $\frac{1}{2}$ to 2 ml. of intralesional Adcortyl (intralesional triamcinolone) will usually produce regrowth of hair in approximately six weeks. One is often reluctant, however, to subject a child of this impressionable age to an injection.

FIG. 3.—The typical appearance of trichillomania is shown here, the area being incompletely bald.

Trichillomania is sometimes confused with ringworm and alopecia areata. In this condition, mischievous children, to gain attention or just as a manifestation of a bad habit, will pull hair from their heads leaving a partially bald area (Fig. 3). Some children will continue their misdemeanour by eating their hair; this leads to the production of a "hair ball." Once

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¹ The following mycological laboratories are willing to examine samples sent by general practitioners: (1) Mycological Reference Laboratory, London School of Hygiene and Tropical Medicine, Keppel Street (Gower Street), London W.C.1. (2) Medical Mycological Section, Bacteriology Department, Anderson College, 56 Dunbarton Road, Glasgow W.1. (3) Mycological Diagnostic Service, Department of Microbiology, Institute of Pathology, Grosvenor Road, Belfast 12. (4) Division of Medical Mycology, St. John's Hospital for Diseases of the Skin, Lisle Street, Leicester Square, London W.C.2. (5) Mycology Laboratory, Bristol Royal Hospital, Bristol.

parents realize what their children are up to they can usually manage the situation satisfactorily. More rarely the habit may be a manifestation of neurosis requiring investigation by a child psychiatrist.

Warts

By far the largest problem in the school-age child is the common wart. It should be appreciated that warts are virus infections, and as far as is known it is the same virus that causes warts on the hands, knees, and so on, as produces them on the feet, though lay people commonly refer to the plantar wart as a "verruca." These infections are so common to-day, and their management so difficult, that it is quite impractical to eliminate the virus from the community. With regard to treatment, multiple common warts in children should be left alone to disappear spontaneously. A few warts on the hands, knees, or elsewhere, may be treated with liquid nitrogen or carbon-dioxide snow. One or two warts on the fingers or hands may, in the older child, be removed by curettage and/or cauterization under local anaesthesia.

Plantar warts are a somewhat more difficult problem since they can be a real cause of disability in childhood and the

incidence has risen remarkably in recent years. Vickers (1961) has added important evidence to show that formalin foot soaks used for 15 to 20 minutes every night for six to eight weeks will not only cure 80% of all plantar warts up to 1 cm. in diameter but will also reduce the recurrence and reinfection rates to extremely low levels if used for approximately three weeks before larger warts are curetted. Five per cent. aqueous formalin should be placed in a shallow receptacle and the child should then put the wart-containing part of the foot into the formalin but should not press on the bottom of the receptacle.

Since dermatological clinics are quite literally swamped with patients with warts to the disadvantage of those with other disorders, it is recommended that when a practitioner is confronted with warts he should institute the formalin treatment for six to eight weeks before referring the patient to a clinic.

Psoriasis

Psoriasis is an important problem in childhood after the age of 4. It is never seen before the age of 1 year and very seldom

before the age of 3 years. The typical attack of psoriasis in the child occurs two or three weeks after tonsillitis, and, though all dermatologists are aware of this clue to the aetiology of the condition, no one at the moment can explain it. The lesions appear suddenly with hundreds or even thousands of little papules which in a few days become $\frac{1}{4}$ in. (6 mm.) to $\frac{1}{2}$ in. (13 mm.) in diameter. They are scaly in the centre and have a red periphery (Fig. 4). As the activity of the condition decreases the advancing red margin becomes scaly. The eruption is generalized and often the face and hands are involved. After three to four months spontaneous recovery takes place, but, of course, recurrence is usually inevitable.

It is customary to recommend rest during an attack of guttate psoriasis but its value may have been over-estimated. With regard to local treatment, one of the newer steroid preparations diluted with a simple aqueous ointment—for example, hydrous ointment (B.P.)—in the proportion of 15 g. of the steroid to 100 g. of the diluent may be employed. After a variable time of months or years a further attack of psoriasis will occur and eventually the full picture of extensor psoriasis as seen in the adult will be present. This will usually require treatment in hospital with steroid preparations applied under polyethylene dressings or with local dithranol paste.

Acne

Acne is usually first seen about a year before the onset of puberty, and, since puberty is occurring earlier, so acne is being seen in younger children. Generally speaking, the earlier the onset of acne the worse is the prognosis. Treatment of the young child is very important if gross pustulation and scarring with all the associated emotional disturbances are to be avoided. A regime consisting of resorcinol and sulphur paste (B.P.C.) applied at night and a standard sulphur cream such as Collosol Sulphur Cream applied in the morning is excellent in the majority of cases. Liquor cetrimide (B.N.F.) may be used for twice-daily cleansing and as a degreasing agent. When acne does not yield to six to eight weeks of this treatment then ultra-violet-light therapy, which can often be arranged by the school medical service, should be added to the regime. If blackheads are troublesome then Bravisor (a paste containing particles of aluminium oxide with 1% hexachlorophane in a detergent basis) may be employed as an abrasive agent.

Conclusion of Part II

The conditions described account for 80% of all diagnoses made in paediatric dermatology. The remaining 20% consist of a very large number of uncommon and bizarre skin reactions. As dermatological therapy becomes more specific—and more efficient—diagnostic accuracy becomes more important. If the family doctor is in any doubt about diagnosis he should not hesitate to refer the child to a dermatological clinic.

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REFERENCES

- Mackenzie, D. W. R. (1963). *Brit. med. J.*, 2, 363.
Vickers, C. F. H. (1961). *Ibid.*, 2, 743.

FIG. 4. — Acute guttate psoriasis, showing typical extensive eruption of small scaly papules which are beginning to coalesce.