Mr. Levy considered that the condition had definitely been caused by the accident.

Ocular injuries through electricity are not common, as shock of sufficient severity to produce fundus changes is generally fatal. The modes of injury are as follows: lightning, exposure of the eyes to electric flash, and electric shock.

The following fundus changes have been reported:

(a) Hyperaemia, oedema, changes in calibre of arteries and veins.

(b) Localized lesions, including scar formation observed round disc (Terrieu), near macula (Haab). Hole at macula with pigmentation at periphery (Kramer).

(c) Fully established choroido-retinal changes, with and without gross interference in visual acuity (Lundsgaard, Junius, Schirmer, Robinson, and Terrieu).

(d) Choroido-retinitis leading to detachment (Lundsgaard).

(e) Detachment in one eye and optic neuritis in the other (Pfahl).

(f) Optic atrophy (Ulbrich, Haas, Junius, Dor).

I am greatly indebted to Mr. Levy for his assistance in looking up the references to reported cases; also to Messrs. Rayner (Hull) for making drawings of the fundi reproduced.

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MAJOR DERMATOSES OF CHILDREN.

BY

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A "dermatological bad bargain" must be our first consideration. Chronic seborrhoea capitis is not dramatic, it is unpleasant to look at, inveterate in its resistance to ordinary treatment; it is a bar to the education of its owner, a hindrance to its possessor's marriage or employment, and, throughout its course, a means of reproach to the profession. I shall first describe the clinical picture as we see it in young children, outline its clinical variations and complications, and suggest a line of treatment that I have most frequently found to be efficacious.

CHRONIC SEBORRHOEA CAPITIS.

The disease appears, when developed in a child of 5 or more years of age, as a scalp condition whose history is seldom definitely obtainable. The scalp is red or pink, scaling all over, and generally dry. Moist patches from exudation of clear serum are covered with heaped-up minor aggregations of damp, yellowish scales. Over the greater part of the head the pink surface is dry, and covered with copious, easily detached white scales. The hair has no lustre; its surface, if dark, is greyed. Generally the hair is plentiful, but at times in an exacerbation of the disease there may be a general loss of hair producing notable alopecia; regrowth is the rule. Were the condition confined to the scalp it would be bad enough, but extensions on to the body are frequent, particularly to the flexures. The folds of the groins, the umbilicus and the armpits, although hairless, are red, and covered with copious, easily detached white small scales. At times all these sites may be moist, exude freely, and show scabs and macerated epidermis, heaped over the reddened surface as a pale yellow malodorous and pultaceous accretion. During acute phases it is common for a moderate adenopathy to develop in the neck and groins. These children otherwise are well, but particular attention should be called to a hall-mark of skin chronicity which they invariably show. The eyelids are reddened at their margins, while yellowish crusts are formed at the roots of the eyelashes. The lids are pink and roughened from frequent rubbing, matted bunches of eyelashes are often seen, and a considerable disfiguring loss of eyelashes takes place also. In about one-third of the cases two further extensions can be seen. First, the eyebrows may be involved; their site is reddened and scaling, or moist and scabbed. Secondly, behind the ears

red fissures may develop; the surface of the ears is pink, the whole ear is thickened, while stiff and macerated scales and caked exudate often cover a retained yellow, sticky, purulent discharge, that has been formed at the crescent of attachment of the auricle to the scalp. Both sexes are afflicted with an equal incidence. The disease is far more common in hospital and institutional work than in private practice. For this, the factors of heredity, uncleanness, a disinclination on the part of the parents to perform unpleasant dressings, and improper feeding, must be taken into account. Although superficial pustular dermatitis speedily clears up when removed into the best hospital surroundings, nevertheless the scaling erythema of scalp and flexures remains, apparently responding to the varied treatment of the house-physician, but, quite unaccountably, exacerbations occur that bear no relation to changes in diet, climatic changes, or to variations in the general health. It is soon borne upon the observer that these patients have a fragile skin; they are photosensitive, and exposure to the sun on a bright day makes pink skin red, and red areas moist. These patients respond by aggravation if they are washed with any household soaps, or if mercurial ointments are applied in an attempt at antibacterial treatment. Such children are not of the nervous type so brilliantly described by Cameron. They do not suffer from dental sepsis, there are no signs of intestinal toxæmia, and their differential blood count is normal. They are not anaemic, or wasted, or mentally dull, although they have a strange tolerance of their persistent malady.

In treatment, personal cleanliness is of the first importance; underclothing and bed linen should be changed and boiled daily. We can assume that by the time these cases have reached the specialist's hands, bland treatments, such as bran baths, calamine liniment, various zinc ointments, soft paraffin dressings, a period of salt-free and also of low sugar dietaries, have already been tried without success. Thyroid extract and ergosterol may have been exhibited, and yet the disease remains. My practice is to order an x-ray epilation to the whole scalp at once. If the child is an inmate of an institution, or under the care of an authority through which such a treatment is not easily obtainable, I prescribe thallium acetate, 8.5 milligrams per kilo of body weight, dissolved in a draught of sweetened water. Whilst awaiting the epilation that should occur after a latent period of three weeks, I swab the scalp and any other lesions with a 2½ volume peroxide lotion. This is speedily mopped away with boiled water, and the scalp and lesions are then sprayed with Sir Lenthal Cheate's malachite green, which is a solution composed of equal parts of 2 per cent. malachite green in 80 per cent. alcohol, and 2 per cent. mercuric chloride in 80 per cent. alcohol. This application is, to some patients, painful for a short time at first, but it is an invaluable aid for infected dermatoses. The scalp should be cropped closely before the application of x rays or giving of thallium, so that local medication may be facilitated. The backs of the ears, the axillae, and the groins should also be sprayed. Frequent application of white lint fomentations for twenty-four hours, or a starch poultice, is occasionally needed before a direct attack can be instituted in this manner. Application of unguentum hydrargyri oxidi flavi to the eyelids twice a day is also advisable. A watch must be made for bed-wetting, and naturally constipation will receive proper treatment. It is a common tradition that soap and water is bad for these patients. Hard water and common soaps undoubtedly are, but I have never regretted bathing these patients daily, using Midgley's or Allen and Hanburys' basic over-fatted soaps; a second water is always used, however, to remove any curds from the skin, and hot, soft towels are advisable to lessen the need of skin friction and to shorten the washing process, since, in winter, these children frequently develop attacks of bronchitis.

During treatment, patients are kept in bed, and at the last stage in the latent period after x-ray treatment, it is highly advisable to use the weapon of protein shock therapy. This is best given on the nineteenth evening after the x-ray treatment, so that the period of fever corresponds to the time of epilation. The customary dose

I employ is 0.1 c.cm. of T.A.B. injected intravenously. The febrile reaction is treated with general heat, hot drinks, sal volatile, and aspirin. When the hair falls, I change over to lotio glycerini plumbi subacetatis applied to the head and to the other lesions thrice daily until the pink flush has gone and the skin texture is natural. This treatment is truly severe, but the dreadful outlook of these patients—if not cured—demands courage and resource on the part of the physician in no way different to that needed by a surgeon dealing with a grave malady.

FLEXURAL PRURIGO.

The second major affection of children is flexural prurigo. Essentially this condition starts at the teething age with a few, or many, papules of strophulus that are often termed "lichen urticatus" or papular urticaria of infants. From the onset of this usually minor malady the child is seldom completely free from skin trouble. Sometimes the mother says the child's skin is affected when exposed to the sun and to the east wind; others say the child is only free when at the seaside, in the salt water. But, as the years go on, the malady changes, and presents an eruption of a constant type: it is found commonly at the bends of the elbows, knees, and wrists, less so in the groins, rarely on the scrotum and penis; sometimes the skin is harsh, purplish, and thick, while small boils and excoriation may be present or absent. The parents or nurse will always volunteer the statement that the child scratches whenever it is not busily occupied. The patient is always of a nervous, sensitive, irritable, emotional make-up; teeth-grinding is common, nail-biting and bed-wetting are also frequently present. In some cases the parents will give a history of epilepsy, of asthma, or of migraine in the family. Pallor of the skin is often a common concomitant; ichthyosis may be present. In this connexion we must remember, however, how Dr. H. Barber of Guy's has stressed the unity and importance of the eczema-asthma-ichthyosis-prurigo complex. The patches of thickened skin or lichenification that we are considering may be small, defined, round areas 3 to 4 cm. in diameter; they may be bands along the course of the borders of the popliteal space; they may be large quadrilaterals filling the skin area of the bends. If, as seems to be the case, prurigo is now accepted to be not a disease of the skin but essentially a subjective irritation in which the skin appearances are secondary to rubbing, scratching, and medication, then these cases are truly prurigo. The differentiation between pruritus as a symptom and prurigo as an eruption accompanied by itching is artificial. The existence of a primary papular localized pathological skin change that causes intolerable itching is a disease conception which many dermatologists will not concede. If the importance of the itching and the unimportance of the physical signs be realized, the term "eczema" will not be applied to these cases, for we are dealing essentially with a nervous malady, a disorder of sensation in which a highly suggestible child has developed a "tic" of scratching; the scratching causes itching, and a vicious circle is perpetuated.

In treating these patients it is well to separate them from a highly nervous, watchful, over-sensitive mother. The affected lesions should be enclosed in pasta zinci or in Unna's paste. The arms should be splinted with tubes of corrugated cardboard, extending from the axillae to below the fingers. Sedative drugs are certainly helpful. A child of 5 will derive benefit from the administration of 10 grains of potassium bromide night and morning. There is no objection to bathing these children with a bland superfatted soap, provided that the dressings are laid out so that immediately after the bath the skin is protected from variations of temperature and is made inaccessible to the child's eyes and fingers; movements of air or the touch of clothing will easily bring on spasms of uncontrollable irritation, and blood can be drawn in two seconds by an active child. Pix liquida is often a most helpful local application, itching ceasing after the first twenty-four hours' treatment; whilst the mother may be entrusted, in a minor case, with a small bottle of pigmentum chloral co., which consists of equal parts of chloral hydrate, menthol, and camphor, and she can rub a drop or two of this into

irritable spots at bedtime to ensure a quiet night. Auto-haemotherapy is of service; 20 c.cm. of blood is withdrawn from a vein at the bend of the elbow and injected immediately into the buttock muscle. This should be done twice a week for three weeks, care being taken to grease the plunger to prevent clotting. Two spaced exposures, each of one-third of an erythema dose, of x rays to all the affected areas of skin at an interval of a fortnight will be most helpful in refractory cases.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

NON-SPECIFIC PROTEIN THERAPY IN ELEPHANTIASIS.

I AM prompted by the interest taken during the last few years in this form of therapy to record the following case of elephantiasis, in which great improvement followed the administration of protein shock injections.

A male Chinese beggar was admitted to the Civil Hospital on November 22nd, 1929, suffering from a solid oedema of the left leg, confined to below the knee. Unlike most of his brethren, he regarded his deformity as an encumbrance rather than an

acquisition, and asked if anything could be done for him. The affected limb was fully twice the size of the other, and the skin was coarse and thickened; digital pressure made not the slightest impression upon it.

The patient, a native of Tsi-nan-fu in the west of Shantung, where, according to Maxwell, elephantiasis is rare, gave a history of two years' duration. He was put to bed and the limb was firmly compressed by a crêpe cotton bandage; next day he was given an intravenous injection of T.A.B. vaccine containing 25 million organisms and suitably diluted with normal saline solution. On the fourth, sixth, ninth, twelfth, and fifteenth days increasing doses were given—namely, 50, 100, 200, 400, and 800 millions. The reactions, though severe, were never alarming, and in each case subsided within twenty-four hours. From the first a steady diminution in the size and a marked change in the consistency of the leg were apparent; the bandage had to be readjusted daily as it became loose.

The photograph reproduced here was taken on the sixteenth day, when he decided to leave hospital and resume his wanderings. As can be seen, the limbs are practically identical in size. That elastic pressure played a large part in the result is evident from the marks of the bandage, which show up clearly in the picture, but I am convinced that elastic pressure alone could not have induced such a favourable effect in so short a time, even in a case admittedly mild as these cases go.

I think that two departures from the usual technique may have been factors in the success which was achieved: (1) the shorter interval between the injections; and (2) the larger doses of the vaccine. I regret I did not take a photograph before commencing treatment, but the latter was purely empirical, and I did not anticipate such a happy result.

Weihaiwei.

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