tuberculosis. It has therefore been suggested that phlyctenules might be a sign of the presence of dead tubercle germs in the system, a proposition difficult alike of proof and disproof. Czerny, writing in a journal of children's diseases, expresses his disbelief in the association of the disease with tubercle, alive or dead, and considers it to be a sign of what he describes as the exudative diathesis, the origin also of infantile eczema. Certain different infections tend to cause an outbreak of the symptoms of this diathesis, measles in particular, and that is why phlyctenules are so often observed during or immediately after an attack of this exanthem. The fact that a good many of the children in whom the disease is present will give a positive reaction to tubercle tests is no adequate proof, for reasons sufficiently obvious, that the disease is itself tuberculous; and a number of careful observers have failed to find the bacillus in phlyctenules which they have excised. The association, so frequently noticed, of some form of gastro-intestinal upset, and which may often be caused by injudicious feeding, may point to absorption of some toxin or undesirable products from the digestive tract being the exciting cause of the "letting loose" of this exudative tendency, and to the advisability of not neglecting the old-fashioned "Gregory" or similar stomachic in the course of treatment. The natural attempt to get rid of these toxins, according to Lafon, causes discharge from various surfaces, such as phlyctenules on the eye and eczema elsewhere. Another view suggested by some successful attempts with bovine tuberculosis is that phlyctenules may be due to infection with that form of tubercle.

DERMATOLOGY.

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TREATMENT OF SOME COMPLICATIONS OF ULCER OF THE LEG.

A METHOD of successfully coping with chronic ulcers of the lower limb was described in the February number of this Journal, but there are certain accessory conditions which need attention to obtain thoroughly satisfactory results. These are dealt with in detail by Schäffer (Beihefte zur med. Klinik, Heft 5, Urban u. Schwartzenberg, Vienna, 1910). In the main, such are grades of inflammatory dermatitis. In its simplest form this appears as a superficial eczema, which in time passes on to ulceration. In addition to disturbances of circulation and vascular
alterations, there is marked irritability of the skin. The appearances
differ in no respect from those of ordinary acute eczema, complicated
by the secondary results of scratching. Only soothing measures are
admissible. One of the best applications is R. Acidi borici, grs. xx.;
Zinci oxidi; Bismuthi subnit., ad; Ol. ricini, 5ii.; Vaselini ad 2iss.
This is spread on a bandage made of lint and applied secundem arteram
from the toes upwards. Such a dressing is usually well borne, even in
the most acute stage. If in exceptional cases it fails to agree, then
one with a basis of cold cream and without the boric acid may be
substituted, or Lassar’s paste thinned down with extra vaseline, and
having boric rather than salicylic acid added, to which, if itching is
severe, 5 to 10 per cent. of bromocoll may be joined, may be used in the
same way.

Should the inflammatory phenomena be remarkably severe, if the
pain is intense, and if all previous efforts at treatment have but
aggravated the condition, then nothing suits better than 3 grs. of
thymol in an ounce of carron oil. When, however, the grade reached
is that of a deeper eczematous process with secondary infection, shown
as a brawny hardiness with some concurrent phlebitis and pustulation,
and when with these there are found erosions, if not actual ulceration,
in the centre of the most pronounced infiltration, moist dressings are
indicated. Watery solutions of resorcin are most valuable, as such act
in combating inflammation while being at the same time bactericidal.
Commencing with a 1½ per cent. solution, the strength may be gradually
increased to 5 per cent. Boric acid may be used conjointly with the
resorcin in the proportion of 2 per cent. of each. When the inflamma-
tion has been reduced, recourse may be had to appropriate salves.

In the chronic torpid, usually infiltrated, eczema of the leg, con-
stituting the third grade, we proceed to more and more active remedies.
Tumenol oil, or the more recently introduced tumenol ammonium, prove
eminently serviceable. Ointments, pastes, or thick lotions are all under
different circumstances available. On the whole, perhaps, soft ointments
are to be preferred. As the state is a chronic one, ample opportunity
of trying combinations is afforded. If a large area is involved, the
remedy can be tested on a part. We may incorporate the tumenol
with Lassar’s paste, beginning with 1 per cent. and rising eventually
even to 10 per cent. Tumenol has itself an antipruritic influence, but
this is augmented by adding 2 to 5 per cent. of bromocoll. We may at
times obtain the desired softening effect by employing a zinc-bismuth
salve as a basis. R. Ol. tumenol; 2-5—5·0 Zinci oxidi; Bismuthi subnit.,
ad; Cerati Galeni, Ung. simp., ad 50·0. This tumenol zinc-bismuth
ointment, which has proved itself of value in other skin affections, as
in anal and genital eczemas, pruriginous eruptions in children, often
acts like a charm.
In late spring of 1901 there appeared in Philadelphia and neighbourhood an unfamiliar eruptive disease, occurring chiefly in household epidemics, whose cause remained obscure. In spring and summer of 1909 it again became prevalent in the same locality. An outbreak among twenty sailors on a private yacht was made the subject of investigation by Schamberg and Goldberger, the former of whom has published the conclusions they arrived at (Journ. Cut. Dis., February 1910, New York). It was found that only those who had slept on some new straw mattresses were affected. The wheat straw in these had come from New Jersey. Straw from these was sifted through a fine flour sieve on to a large glass plate over white paper. Close scrutiny of the siftings under strong electric illumination soon detected some slight motion. The moving particles were touched with a needle moistened in glycerine and transferred to a glass slide. Search with the microscope disclosed the presence of a mite of very minute dimensions. This was identified by Mr. Nathan Banks as closely related to, if not identical with, the pediculoides ventricosus. This is parasitic on the larvae of soft-bodied insects. It acquires considerable economic importance, owing to the fact that the insect hosts are usually grain-destroying parasites. The mite is inimical to the grain insects and therefore favourable to the preservation of the grain. The seasonal prevalence may perhaps be explained thus, that as the warm weather of May comes on, the grain moth in the straw develops from the larval stage, and, acquiring wings, leaves the straw, so depriving the pediculoides of their nourishment. The famished mites thereupon attack human beings when brought into contact with them. In the case in question, on exposing the bare arm for an hour between two of the incriminated mattresses, a number of characteristic lesions appeared at the end of sixteen hours. Five of the mites applied to the axilla in a watch-glass produced in the same space of time five characteristic lesions. The eruption consists of wheals, many exhibiting at their summit a central pin-point vesicle, more rarely a pustule. This constitutes the lesion peculiar to the disease, but, instead of pure wheals, the efflorescence may be partly erythematous or papular. The lesions themselves are a rose colour, from the size of a lentil to that of the finger nail, and edematous like those of ordinary urticaria. Exceptionally the vesicles on the erythematous-urticarial base are of some size, and then chicken-pox may be suspected. The eruption is generally profuse, involving the trunk and limbs. It is usually accompanied by intolerable itching, worst at night and interfering with sleep. The ordinary secondary results from scratching ensue. During the early period of the attack chilliness, sometimes nausea, may be present, or even slight pyrexia. As regards the blood, moderate leucocytosis and
marked eosinophilia were found at the height of the disease. The existence of albumen in the urine was determined in three out of twenty cases examined for it. Unlike the scabies mite, the pediculoides does not burrow into the skin. It is probable that in the process of extracting liquid nourishment from the skin, it synchronously injects an irritating substance which gives rise to the lesions. In treatment it is a comparatively simple task to obtain a cure. Schamberg has found the following ointment specially efficacious, as it not only destroys the mites, but at the same time relieves the cutaneous symptoms. R. Beta naphthol, gr. xxx.; Sulphur. præcip., gr. xl.; Adipis benzoat., ʒi., M. The clothing should be boiled. If the source of infection is a straw mattress, it can be disinfected by exposure in a closed chamber to steam, sulphur fumes, or formaldehyde. Ordinarily, the itching subsides within twelve to thirty-six hours, and the eruption is gone in a week or ten days. If, however, the cause is not recognised and the use of the mattress continued, patients may suffer severely for three to seven weeks, then slowly recover. It would seem that the mite dies after a time and permits spontaneous cure.

**The Therapeutic Use of Refrigeration.**

Pusey, one of the earliest experimenters with this method, has recently given a résumé of his and others’ experience (Journ. Cut. Dis., July 1910, New York). Carbon dioxide snow, the most readily obtained refrigerating agent, has a freezing-point of 80° C., and converts tissues into solid ice instantly upon contact. It can produce any degree of reaction up to complete destruction in from a few seconds to a few minutes. The pain accompanying it is trivial. The principle underlying its therapeutic use is the production of a relatively deep, sharply-defined inflammatory reaction in living tissue by sudden congelation. Its proportion is capable of perfect regulation. It is followed by an interstitial scar-tissue, with a minimal amount of apparent cicatrisation. Its effect is due to two factors—first, the amount of pressure exerted; second, the duration of the freezing. (1) Pressure. Unless this is sufficient to bring the mass of snow in contact with the skin, no freezing occurs. According to the degree of pressure of varying firmness, freezing to a depth of $\frac{1}{32}$ to $\frac{1}{8}$ of an inch follows. Therefore judgment must be exercised as to the amount of pressure employed in any given case. (2) Duration. This is the most important factor. Momentary freezing produces a slight inflammatory redness. If the freezing is prolonged for not more than five to ten seconds, it will, as a rule, merely give rise to an acute dry dermatitis. If continued for twenty to thirty seconds, there is a very intense inflammatory reaction, usually with the formation of a bulla and succeeded by a certain amount of ultimate sclerosis of the skin, without apparent scarring, though there
remains a permanent whitening of the areas. A minute or more results in the production of a thin dry eschar, separating in two or three weeks, leaving a thin white scar. In all cases the application should be timed with a watch. The less abundant the blood-supply to the part and the younger the patient the greater the reaction, hence care must be taken in the case of young children or of thin-skinned fair women. A part which has previously been exposed to X-rays or radium is extremely sensitive to freezing. The snow is prepared by collecting it from the cylinder in a chamois-leather bag and moulding it in a conical glass by pressure, ramming it down with a rod. The mass should then be pared to the shape and size of the lesion. The surface must be cleansed from scales or crusts. Practically no after-treatment is necessary. Among the diseased conditions in which carbon dioxide snow has proved useful, one of the most prominent is lupus erythematosus. It is well known how capricious and how obstinate this ailment may prove itself. Opinions vary as to the duration of exposure. Pusey aims at producing a stimulating rather than a destructive reaction. As a rule his applications have been from five to fifteen, only occasionally extending to thirty, seconds. In all cases there has been improvement, and usually partial or complete disappearance, followed by thin white scars. The brown stains of chloasma and those of senile lentigo have vanished after applications of ten seconds. Applications of twenty to thirty seconds occasion prompt disappearance of the multiple soft warts of children, and longer freezing serves to disperse the large thick warts which form by the side of the nails. Moles and pigmented naevi yield satisfactorily to this method. In children the duration of exposure is from ten to thirty seconds, in adults a minute or rather more. In flat vascular naevi the results are uncertain, but are much better in the small hypertrophic vascular variety. It is also of great value in senile keratoses and senile warts, and here the freezing should last from forty seconds to a minute.

TREATMENT OF INTERTRIGO IN INFANTS.

The intertriginous eczema affecting the genital regions of infants is a relatively harmless affair when it occurs as the sole manifestation in well-cared-for children. Frequent change of properly-aired napkins and the employment of the ordinary zinc pastes and powders suitable for such a condition serve as a rule to cure. But much more serious are those instances where it is but part of a widespread or general eczema, or when the mother or nurse is careless or ignorant. Attempts have been made to combat the difficulty by using varnishes such as traumaticine or collodion, which are resistant to water, but these, when applied, cause pain, and are, in addition, irritating. Those applications which are soluble in water, as zinc jelly or gelanthum cream or lotions,
are too readily washed away to prove of use. Unna (Monatsh. f. Prakt. Dermat., 1st April 1910, Hamburg) describes a combination at once simple and effective. This consists of zinc oxide 50°0, eucerine and gelanthum, each 25°0. (Gelanthum, it may be mentioned, is composed of tragacanth and superheated gelatine, while eucerine is a derivative of wool fat.) This produces a soft snow-white mass, easily spread on the skin, which imparts a pleasant feeling of coolness and soon dries. To render it waterproof, the salve, immediately after being spread on the skin, is dusted with a powder consisting of equal parts of tannic acid and carbonate of magnesia. So employed, there results a dry, firmly-adherent coating, which will admit of several changes of napkins. When it peels off it requires to be renewed. Under its use the eczema intertrigo heals rapidly and comfortably. The same dressing will be found useful in the treatment and prevention of bedsores.

A Hint for the Treatment of Inveterate Psoriasis.

Brocq, in course of some criticism and reflections on the etiology of psoriasis (Ann. de dermat. et de syph., March 1910, Paris), observes that the argument is illusory, which consists in stating that psoriasis has no connection with the alimentary regimen, because it can be made to disappear by external applications without putting the patient on any special dietary. The influence of regimen in this disease is probably a distant one, acting but slowly on the skin by modifying the condition of the general system. Suitable local measures can cause psoriasis to disappear without modification of the regimen, but the primary cause persists, and so soon as the local medication is suspended the disease recurs. Politzer is right when he says that faults of regimen are not the direct producers of psoriasis, but it is more doubtful if he is correct when he asserts that psoriasis has no connection with regimen; and what proves that this proposition in its absolutism is not exact is the real action which total vegetarianism exerts in the cure of many examples of very intractable psoriasis. One treats a psoriasis locally, yet, notwithstanding all our care, in spite of the strength of our applications it refuses to vanish. Sometimes even the most energetic remedies—oil of cade, pyrogallic acid, chrysarobin, &c.—are not tolerated. If, in such circumstances, the patient is put on a purely vegetarian diet, it is seen that, in the majority of cases, the eruption fades under the influence of the same medicaments which had formerly proved ineffectual, or had set up inflammatory reactions. The fact is indisputable, whatever the explanation.