Diseases of the skin / by J. Ferguson Smith.

CATECHISM SERIES

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J. FERGUSON SMITH, M.A., M.B.

SECOND EDITION

EDINBURGH

E. & S. LIVINGSTONE, 16 & 17 TEVIOT PLACE

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INDEX

MADE IN GREAT BRITAIN

DISEASES OF THE SKIN.

STRUCTURE AND FUNCTIONS OF THE SKIN.

Describe the Structure of the Skin.

The skin consists of an epithelial portion, the epidermis, and a connective-tissue portion, the dermis or corium.

Describe the Epidermis.

The epidermis consists of five layers, which are to be regarded rather as stages in the development of the epidermal cell than as separate structures. They are (from within out) the basal layer, the Malpighian or prickle-cell layer, the stratum granulosum, the stratum lucidum, and the stratum corneum or horny layer. Commencing at the level of the stratum granulosum, the epidermal cell becomes converted into horn, the nucleus being lost at the level of the stratum lucidum. These flattened, horny cells are shed impalpably one by one. The basal and Malpighian layers are deeply indented, so as to interdigitate with the papillæ of the corium. The portions of epidermis between the papillæ are known as interpapillary processes. The epidermis is devoid of blood-vessels. It is traversed by hair-follicles and the ducts of sweat-glands.

Describe the Structure of the Corium.

The corium consists of two parts : an upper, the pars papillaris, and a lower, the pars reticularis. The pars papillaris is composed of loose, white, fibrous tissue, with a fine network of elastic fibrils. It consists of finger-like processes, which fit into the indentations of the epidermis, and are known as papillæ. The pars reticularis is continuous with the pars papillaris. Its fibres, both white and elastic, are coarser and more closely set.

What is a Hair-follicle ?

A hair-follicle is an invagination of the epidermis, which shows all the layers of the latter, with slight modifications. It runs down through the corium, often into the hypodermic

tissue. Sebaceous glands open into hair-follicles near the surface, and smooth muscle bundles, the arrectores pilorum, are attached to them.

Describe the Sweat-glands.

The sweat-glands are found in the deepest part of the corium or in the hypoderm. They consist of coiled tubes, with long ducts, which pierce the epidermis, and open on the surface of the skin.

Describe the Blood-supply of the Skin.

There are two systems of plexuses which supply the skin—a deep in the hypoderm, and a superficial in the pars papillaris. Each arteriole supplies a small area of skin, which is drained by a venous plexus at its periphery. Active or arterial hyperæmia is thus characterised by red *spots* : passive or venous hyperæmia by a *reticular mottling.*

Describe the Lymphatics of the Skin.

The lymphatics of the skin commence as blind finger-like processes in the papillæ. From five to seven of these open into long perpendicular vessels, which have no free intercommunication until they reach the lymphatic plexus, which lies on the deep fascia.

What are the Functions of the Skin ?

To protect ; to appreciate sensations ; to regulate heat ; to eliminate waste products through the sweat ; and, in a very slight degree, to respire.

THE EXAMINATION OF A PATIENT SUFFERING FROM SKIN DISEASE.

How would you proceed to examine a Patient suffering from a Skin Disease ?

The first essential is a good light. Daylight is almost indispensable, though the modern " Artificial Daylight " electric lamp may be used as a substitute. Some rashes, *e.g.* syphilitic

roseola, may be quite invisible in artificial light. The *whole* of the patient should be examined, including the mucous membrane of the mouth and throat, except in cases where the diagnosis is obvious. It will not seldom be found that the earliest and therefore most typical lesions are to be seen in some region which the patient has not mentioned as being affected.

On what would you base your Diagnosis ?

On the primary lesion or lesions found, their colour, shape, consistency, localisation, and grouping.

Name and define the Primary Lesions of the Skin, giving Examples.

Macule : a localised change of colour of the skin. It may be of any colour or size. Examples : freckle, syphilitic roseola.

Papule : a small solid cutaneous elevation, from the minutest visible to the size of a coffee-bean. It may be dome-shaped, conical, or flat-topped, circular, elliptical, or polygonal ; any colour. Examples : papular syphilide, lichen planus.

Tubercle, Nodule, Node, and Tumour are names given to larger solid lesions.

Vesicle : a small collection of fluid in the epidermis or between the epidermis and the pars papillaris. Examples : herpes, eczema.

Bulla : a larger collection of fluid. Examples : pemphigus, erythema iris.

Pustule : collection of pus in or immediately below the epidermis. Usually secondary, but occasionally primary. Example : pustular syphilide.

Wheal or Pomphus : local œdema of the corium, due to vasomotor disturbance. Raised white patch, with red border, or red all over. Examples : urticaria, mosquito-bite.

Name and define the Secondary Lesions of the Skin.

Scale : a small mass of epidermal cells which have adhered together instead of being shed impalpably one by one. It is due to imperfect cornification (parakeratosis).

Crust : dried skin exudations (serum, pus, blood) plus scales and even hairs.

Excoriations : breaches of continuity of all or some layers

of the epidermis, due to scratching. They may be circular or linear.

Fissures : cracks in a skin which has lost its elasticity from infiltration or parakeratosis, so that it gives way when stretched.

Ulcer : a breach of continuity of the skin, which extends into the corium or even deeper.

Scars are the results of healing when there has been destruction of corium or hypoderm.

Infiltration : an increase in the cellularity and vascularity of the corium.

TREATMENT.

INTERNAL TREATMENT.

What Part is played by Internal Treatment in Dermatology ?

Any departure from normal should be treated on general medical principles, *e.g.* anæmia, dyspepsia, constipation, and the like. There are a few drugs which have a specific effect in diseases. Such are arsenic in chronic scaly conditions, as psoriasis and lichen planus, and in the bullous diseases, as dermatitis herpetiformis and pemphigus ; organic arsenical compounds in syphilis ; mercury in lichen planus and syphilis ; iodine compounds in syphilis, actinomycosis, and sporotrichosis ; bismuth in syphilis, bismuth and gold in lupus erythematosus, and thallium to produce epilation. Other drugs often useful, though less definitely specific in their action, are salicylic compounds, especially salicin, in psoriasis, erythema multiforme and nodosum, and lupus erythematosus ; quinine in lupus erythematosus ; and alkalies in acute seborrhœic conditions. Thyroid is occasionally useful in psoriasis, alopecia areata, and xerodermia. Cannabis indica, bromides, aspirin, and phenazone are all sometimes useful in itching conditions, but must be employed cautiously. Opium and its alkaloids should never be used for pruritus, as they generally aggravate it. It is often desirable to promote diuresis, but most diuretics are also diaphoretics, and are liable to increase the congestion

of the skin, so that reliance should be placed on the drinking of large quantities of bland fluids.

DIET.

What Part does Diet play in Treatment ?

The proper regulation of the diet is of very great importance, but no system of dieting can be regarded as in itself a cure for any skin disease. In general, strong or hot tea and coffee, spices, condiments, and salted or preserved foods are to be avoided. Alcohol is always harmful, but occasionally in elderly patients accustomed to a regular ration its continuance may be thought preferable to its sudden withdrawal. Excess of any one constituent in the diet, particularly of carbohydrates, is to be avoided. Tobacco, except in excess, is probably harmless to the skin. In urticaria one particular food-protein may be found to be the specific cause of the disease. The Gerson diet, which is poor in NaCl and rich in fresh fruits and vegetables and other vitamine-containing foods, is of some service in tuberculosis.

VACCINES AND SIMILAR METHODS.

Are Vaccines useful in Dermatology ?

Results of specific vaccine treatment in skin diseases are in general very disappointing. Staphylococcal vaccines sometimes succeed in furunculosis ; never in sycosis, or folliculitis of the scalp. Streptococcal vaccines occasionally seem to cure recurrent erysipelas, and are worth trying in chronic conditions, such as lupus erythematosus, which may be due to focal sepsis. The use of B. acnes vaccine for acne vulgaris has largely been abandoned by dermatologists all over the world. Actinomyces vaccine has seemed to be curative in a few recorded cases. Good results have been obtained, however, in many chronic conditions by the use of non-specific vaccines to produce "protein shock."

Staphylococcal toxoid, which is made by acting on the toxin with formalin, is a much more powerful means of raising the antibody-content of the blood than are vaccines.

What is Protein Shock Treatment ?

This name is given to a method in which a foreign protein is injected intravenously, so as to produce a pyrexial reaction. Bacterial proteins are most suitable for this purpose, as the dose can be accurately measured, and B. typhosus and B. coli communis are the organisms most often used. A temperature of at least 104° F. should ensue on each injection, or no benefit is likely to result. Success at times follows this treatment in psoriasis, chronic eczema, prurigo, and other chronic dermatoses.

What other Modes of Protein Therapy may be used ?

Autohæmotherapy, which consists in withdrawing 10 c.c. of blood from the patient's vein, mixing it in the syringe with 2·0 c.c. of 2 per cent. sodium citrate solution, and immediately reinjecting it intramuscularly. Injections of sterilised milk, or of milk albumen, intracutaneously, subcutaneously, or intramuscularly. Injections of normal horse-serum—often dramatically effective in purpura.

LOCAL TREATMENT.

What are the Objects of Local Treatment ?

To cleanse, to relieve symptoms, and to cure.

What Cleansing Agents are used in Dermatology ?

Baths, plain or medicated, poultices, oils, and soaps.

What Types of Baths are useful, and how would you employ them ?

Baths should be of moderate temperature, about 95° F. being the optimum. Plain, soft water is useful to remove offensive secretions, etc. Emollient baths, containing from 2 to 6 lbs. of bran, or 1 lb. of starch, to 30 gallons of water, are used in itching, erythematous and scaly diseases. Alkaline baths, containing sodium bicarbonate, from ℥ii to ℥x, are also useful in itching and scaly diseases. Sulphur baths, containing potassa sulphurata, ℥ii to ℥iv, are used in scabies, chronic eczema, and psoriasis. Iodine baths, with tinct. iodi, ℥i in ℥xx of warm

water, are very useful local treatment in acute septic conditions, especially of the hands.

Are Poultices suitable Applications ?

In general, no. They provide with their moist heat and carbohydrate composition an ideal culture-medium for micro-organisms. The one exception is the boric or flavine starch poultice.

How would you make and apply a Boric Starch Poultice ?

Take a teaspoonful of boric powder or 5 grains of acriflavine and four tablespoonfuls of rice starch ; mix them with a little cold water ; add a pint of boiling water, and boil, stirring until thick. Either pour the poultice, while still just warm enough to run, on to dressing-cloth, and allow it to set in a thick layer, or else allow it to cool in a basin ; turn it out when " set," and cut slices $\frac{3}{4}$ inch thick. Apply to the affected part, placing a single layer of butter-muslin between poultice and skin. Keep it constantly applied, changing the poultice every four hours during the day, and using a cleansing and cooling lotion at each change.

How would you employ Wet-dressings ?

Wet-dressings of plain lint, soaked in a solution of tannic (1·0 per cent.) and salicylic (0·1 per cent.) acids, are useful in acute dermatitis.

Wet boric or carbolic wet-dressings are used hot in acute septic conditions, and cold boric or 2 per cent. aluminium acetate wet-dressings in cases of ulceration or where the deeper layers of the skin are denuded, as in pemphigus.

What Precaution is to be observed with Wet-dressings in the Presence of Sepsis ?

An efficient antiseptic, such as $HgCl_2$ (1 in 1000, or weaker if the skin is much inflamed), or acriflavine (1 in 1000 in normal saline), should be used freely at each change of dressing.

What are the Uses of Oils ?

Warm oil—olive, linseed, or almond—is used to soften and remove crusts, and also to remove old ointment before making

a fresh application. Oils are also used as ingredients of liniments and sometimes of ointments.

Discuss the Use of Soaps in Dermatology.

Most soaps contain an excess of alkali, and so dissolve and remove the natural grease of the skin. They are thus harmful, except in conditions where the fat is in excess, as seborrhœa and acne vulgaris, or where there is scaling with a relatively non-irritated skin, as in many cases of psoriasis. Medicated soaps were formerly much in vogue, but it is now recognised that efficient concentrations of drugs can seldom be achieved by this means, and medicated soaps are often merely a tactful mode of prescribing increased cleanliness.

What is an Ointment ?

A fatty basis in which is incorporated one or more active medicaments. The bases most in use are lard, soft paraffin, and lanolin, singly or in combination.

How does an Ointment act ?

The fatty base melts with the heat of the body, and spreads out to form a waterproof layer, under which the epidermis becomes macerated and permeable, so that the fat penetrates, carrying the contained drug with it. Lanolin is the most, soft paraffin the least, penetrating of the bases named. Penetration is aided by massage, and by the use of an impervious covering, such as gutta-percha tissue. The quality of the base is very important, as rancid or impure fats may prove very irritating.

What are the Indications and Contra-indications for Ointments ?

They are to be used when penetration of a drug is desired, and in dry scaly conditions. They are in general contra-indicated in moist weeping conditions, as they prevent transpiration and increase the sodden condition of the skin, thus leading to increased microbial growth.

What are Pastes and Creams ?

Ointments modified by the addition of such quantities of an inert powder or water respectively as will render them pervious

to moisture from the skin. Pasta Zinci contains equal parts of zinc oxide, starch, lanolin, and soft paraffin. The Pharmacopœial Ung. Aquosum is a good example of a cream.

What are Liniments, and what are their Uses ?

Liniments are preparations, the basis of which is a mixture of oil and water, with which various active remedies may be included. They are intermediate between ointments and lotions. The oil prevents undue drying of the skin, while the water cools and permits transpiration. Calamine liniment, the formula of which is—Calaminæ Præp. ℥iii, Olei Lini, Aq. Calcis āā ℨiv, to which often Ichthyol ℥ii may, with advantage, be added, is a "fool-proof" remedy for weeping eczema, which can be given freely to the most ignorant out-patient, in the certain knowledge that he can do himself no harm with it. Cotton or linen rag should be wrung out of the liniment and wrapped round the affected part, being changed twice or thrice daily.

Describe Lotions and their Uses.

Lotions are preparations with a basis of water or spirit, and, like ointments, may contain a great variety of active drugs. They may be soothing, astringent, stimulating, antipruritic, etc. Their great advantages are their ease of application and their relative cheapness. Often they contain a powder, such as calamine or zinc oxide, which is left behind as a protective covering on the skin when the lotion dries. These powdery lotions should never be used on hairy parts, except in infants, or where there is much discharge.

What are the Uses of Dusting-powders ?

To dry up discharges and secretions, and to protect the skin. They may also include astringent, antipruritic, and antiseptic drugs. They may be used after rubbing in an ointment, for example in psoriasis and dry seborrhœic conditions, in order to cover the resulting greasiness of the skin and to maintain the ointment in contact with it. Powders in common use include talc, kieselguhr, oxide of zinc, and starch. Their contra-indications are the same as those for powdery lotions.

What Caustics are used in Treatment of the Skin?

The principal are carbolic acid, trichloracetic acid, liquor hydrargyri nitratis acidus, pyrogallic, and salicylic acids. The last named is useful in the form of a plaster to produce a slow caustic effect.

PHYSICAL METHODS OF TREATMENT.

Name the Physical Methods in use in Dermatology.

The cautery; freezing with CO_2 or liquid air; the electric current; X-rays; ultraviolet light; radium; massage.

What are the Uses of Massage?

Massage is useful where the circulation is defective, particularly in chilblains and varicose veins.

Describe the Physical Caustic Methods and their Uses.

The actual cautery, whether Paquelin's or the Galvano-cautery, is not much used, but is sometimes of value in lupus vulgaris, particularly of the mucous membranes, and for destroying small nævi, etc. CO_2 snow, which destroys tissue through extreme cold (–79° C.), is much more generally useful. It has to some extent a selective action, destroying actively dividing cells more readily than the fixed tissue-cells, and it leaves a very smooth and sightly scar. Among many diseases amenable to treatment by this means are warts, nævi, lupus erythematosus, keratosis senilis, rodent ulcer (after scraping), lichen planus hypertrophicus, and a few cases of lupus vulgaris.

Give the Forms of Electric Current used in Dermatology, their Effects and Indications.

The constant current is used in electrolysis to remove superfluous hairs and destroy small nævi and telangiectases; in iontophoresis to carry drugs into the skin, as copper in kerion, and zinc in chronic suppurative conditions and lupus vulgaris; and also occasionally to relieve pain in herpes zoster, and to stimulate the circulation in chilblains. Faradic currents are also used for the last purpose. High-frequency currents have general and local effects which are not yet understood, but they

are used with success in various diseases, such as alopecia areata, local and general pruritus and lichen simplex chronicus. Diathermy is the name given to the use of currents of still higher frequency and voltage. They generate heat actually in the tissues, and in Dermatology are employed mainly to produce a penetrating caustic effect in cases of skin carcinoma and other tumours, and lupus vulgaris. The electric current is also used to generate X-rays and ultraviolet light.

What are the Effects of X-rays ?

In small doses they stimulate, while in larger doses they destroy, having, like CO_2 snow, a selective action on actively dividing cells. This property is shown by their action on the hair-follicles, the skin glands, the basal layer of the epidermis, and pathological exudates in the corium, to bring about epilation, diminution of sweat and sebaceous secretion, reduction of hyperkeratosis, and removal of infiltration respectively. They are invaluable in the treatment of ringworm of the scalp, favus, and sycosis barbæ, and extremely useful in a great variety of diseases, as acne vulgaris, chronic eczema, lichen planus, plane warts, hyperidrosis, localised recurrent boils, *e.g.* of axilla or back of neck, pruritus ani and vulvæ, mycosis fungoides, lupus vulgaris, rodent ulcer, sarcoma cutis, chronic ulcers (not syphilitic). They must always be used with great caution, as excessive reactions may follow even moderate doses in the presence of inflammatory diseases of the skin, while repeated small doses may be followed, even years afterwards, by atrophy of the skin, with telangiectases, warty growths, and even carcinoma. They should never be employed for removal of superfluous hair on the face. They are measured by the colour-changes which they induce in various substances, the indicator most in use in Britain being Sabouraud's pastille of barium platinocyanide, which is changed from its normal colour to a tint " B," of which a standard is provided, by a dose of X-rays just sufficient to cause temporary epilation, without permanent damage to the skin.

Give an Account of the Use of Ultraviolet Light in Dermatology.

Ultraviolet light, whether from the sun or artificially produced, is applied to the body generally in order to

increase resistance to infection, especially tuberculosis. Sun-baths are very valuable in tuberculosis of the skin, and recently quite comparable results have been obtained by the use of carbon-arc lamps. The patient's body is exposed to the lamp, without the intervention of glass, for periods ranging from half an hour to six hours or even more daily or every second day. Cases of lupus vulgaris which had resisted all treatment for many years have been cured in a few months by this means. Tungsten-arc and mercury-vapour lamps are also much in use, but are more suited for local concentrated application. The carbon-arc is also used in this fashion in the Finsen lamp and its modifications. The indications for the local use of ultraviolet light are by no means so well defined as those for X-rays, but it has been used with some success in, among other conditions, alopecia areata, superficial septic conditions, chronic ulcers, lupus erythematosus and vulgaris, eczema, acne vulgaris and rosacea, and psoriasis.

Give the Uses of Radium in Skin Diseases.

Radium acts similarly to X-rays, but its hardest rays are much more penetrating than the hardest X-rays which can be produced. Its portability is a great advantage, which is, however, more than offset by its high price. It is particularly useful in nævi, rodent ulcer, and inoperable epitheliomata.

THE CLASSIFICATION OF SKIN DISEASES.

How can Skin Diseases be Classified ?

The ideal classification would be by etiology, but in the present state of our knowledge this is not possible, and only an arbitrary arrangement is practicable. We may divide skin diseases into four groups : (1) Pure Dermatoses ; (2) Parasitic Diseases and Infections ; (3) Neoplasms and Nævi ; (4) Diseases of the Appendages.

What do you understand by the Pure Dermatoses ?

A. Diseases due to vascular disturbance—erythemata, urticaria, drug eruptions, exanthemata and purpuras.

B. Diseases characterised by serous exudation—vesicular and bullous dermatoses.

C. Diseases characterised by scaling or lichenification, or both, including psoriasis, the erythrodermias, and the lichens.

D. Dystrophies, hypertrophies, atrophies, and pigmentary disorders.

DISEASE DUE TO VASCULAR DISTURBANCE.

What Classes of Erythemata are there ?

The diffuse, the macular, and the nodular.

Give an Account of Erythema Scarlatiniforme.

This is a punctuate bright scarlet eruption, which often covers the whole body. The throat is red, but it and the tongue are not like those of scarlatina patients. Itching is often present, but not often severe. There are moderate pyrexia and systemic disturbances. The pulse is not more rapid than would be expected from the temperature, as is the case in scarlatina. In a few days the rash fades, and a fine branny scaling ensues. Relapse is not uncommon. The etiology is varied. It may be caused by drugs, as 914, serums, tuberculin, mercury ; by septic absorption ; and it may follow the giving of an enema. The diagnosis from scarlatina is sometimes difficult, but the comparatively slow pulse in the early stages and the absence of the typical tongue and throat should suggest the correct diagnosis, while later there is absence of the massive desquamation of the hands. A history of previous attacks would suggest the erythema. In treatment the cause should be removed if possible, a light or even fluid diet given, a saline purge at the outset. Sedatives may be given if there is much itching, and calamine lotion or a dusting-powder locally. Ointments should not be used until desquamation occurs, when Ung. Aquæ Rosæ may be prescribed.

Describe the Symptoms of Erythema Multiforme Exudativum.

This is an acute disease characterised by the sudden appearance of vivid red or even violaceous macules or papules. The backs of the hands and the insteps are often the first to be

attacked, later perhaps the forearms and shins, and the sides of the neck. Any part of the body may be attacked. The buccal mucosa is frequently involved, and occasionally the conjunctivæ. The lesions vary in size from a lentil to a shilling or even larger, and may be raised 2 or 3 millimetres above the surrounding skin. In some cases bullæ are formed. These may become pustular, and on their rupture painful ulcers may be left. In the variety known as e. iris bullæ are formed, often with a secondary ring-shaped bulla round the primary one ; the mucosa of the mouth is often badly affected, and there is a great tendency to relapse, the relapses always being of the same type.

What is the Etiology of Erythema Multiforme ?

Obscure and probably varied. It is one of the forms which the serum disease may take, and probably is a manifestation of hypersensitiveness. Focal sepsis may play a part at times. It has been recorded in epidemic form, and may be a specific infection.

Give the Diagnosis, Prognosis, and Treatment of Erythema Multiforme.

It may be diagnosed from the rare bullous urticaria by the absence of typical wheals, absence or slight degree of itching, and of dermographism, and by the presence of mucous-membrane lesions in some cases ; from dermatitis herpetiformis by the absence of itching and of the characteristic grouping of the bullæ, and also by the course of the disease ; from pemphigus by the fact that the bullæ arise on papular or nodular lesions, and not from apparently normal skin. The prognosis is good as regards each attack, but there is some liability to recurrence. There is no specific treatment, but any suspected cause should be attacked, *e.g.* septic foci. Salicylates internally, especially salicin, and intestinal antiseptics may be given, and lactic acid bacilli have been recommended. Injections of colloidal manganese have been credited with preventing relapse. Locally calamine lotion is often all that is required, while in severe bullous cases wet dressings of 2 per cent. aluminium acetate are useful, and antiseptic washes when the buccal mucosa is involved.

Give an Account of Erythema Nodosum.

This is an acute disease characterised by the appearance on the shins, less often on the forearms or elsewhere, of red, painful, tender nodes, varying in size from a lentil to a robin's egg, accompanied by malaise, pyrexia, and not infrequently by a systolic murmur at the mitral area. The lesions last for several weeks, and exhibit a play of colours like fading bruises. Fresh crops of nodes may prolong the illness for two or three months. It is quite often seen in open tuberculosis, and in several cases tubercle bacilli have been isolated from the blood, while it has been known to follow the administration of tuberculin. It is commonest in children and females. The prognosis is good *per se*, but be on guard for tuberculosis. Relapse is uncommon. The diagnosis may be made from Bazin's disease (E. induratum) by the facts that the latter is a chronic disease, that the lesions occur mostly on the backs of the legs, and that they tend to ulcerate; from syphilitic periostitis by the absence of other signs of syphilis, including the Wassermann reaction, and the fact that the lesions are in the hypoderm, not in the periosteum; from abscess by the fact that the lesions are multiple and generally symmetrical, and by the absence of fluctuation. Treatment includes rest in bed, a fracture cage to take the weight of the bed-clothes off the tender shins, and sedatives, especially aspirin. Local applications may be cooling, as lotio plumbi et picis dropped on to lint covering the parts and allowed to evaporate, or warm, as antiphlogistine. Later, iron and perhaps arsenic are indicated for the anæmia which ensues in most cases.

What other Erythemata are there?

There is a group of toxic and septic erythemata which are characterised by pink or red circular or oval macules, which may be very large and may clear up in the centres and form striking gyrate patterns. They are seen in cases of septic throat, etc., and also after the injection of antitoxin. E. pernio or chilblain is due to bad peripheral circulation. E. ab igne is due to exposure to heat, as from the fire. It is seen most often on the shins, and it leaves a peculiar reticular pigmentation which might be mistaken for that due to syphilis. E. solare or sunburn needs no description. E. perstans is a rare condition, the

lesions of which resemble those of E. multiforme (non-bullous), but persist for weeks or months.

Give an Account of Urticaria.

This is a disease characterised by the sudden appearance of wheals on any part of the body, accompanied by intense itching. At first white, they soon become red, often with a white centre. Rarely they become vesicular. At the outset there are often malaise and symptoms of gastro-intestinal disturbance, and occasionally slight pyrexia. The skin tends to react with a wheal when scratched, this sign being called dermographism. There may be only one attack, or attacks may be occasional or frequent, even daily. Varieties are : U. bullosa, in which some of the lesions become bullous ; U. papulosa, in which the wheals are very small and papular—which will be dealt with separately ; U. perstans, in which the individual lesions last for days or weeks ; and giant urticaria or angeio-neurotic œdema, in which the lesion develops in the hypodermic tissue and gives rise to large local swellings. These may involve the region of the epiglottis and cause death by suffocation.

What is the Etiology of Urticaria ?

Very varied. External causes include the bites of insects, the stings of jelly-fish and nettles, and the hairs of caterpillars. Internal causes include drugs, as aspirin, food-proteins, intestinal parasites, metabolic disturbances, and bacterial proteins. In relapsing cases the cause is commonly a bacterial or a food-protein. In a certain number of cases the cause can be shown to be one particular food-protein. This may be detected by keeping a note-book with two columns, in one of which the patient notes every foodstuff taken, and in the other every attack of urticaria. It may thus become apparent that the consumption of a certain food is always followed by an attack. A more direct method is by employing cutaneous tests.

Describe the Technique of Cutaneous Tests for Protein-Sensitiveness.

The skin of the forearm is lightly scarified in a number of places, and on each a drop of a weak alkaline solution of a

protein is placed. On one a drop of the alkali alone is placed, to act as a control. A positive reaction is indicated by the appearance at the site of the test of a wheal, surrounded by a red halo, the control remaining free from anything but a small wheal without halo.

Discuss the Diagnosis and Prognosis of Urticaria.

The diagnosis of an acute attack presents no difficulty. The wheal and dermographism, with the intense itching, are quite characteristic. In chronic cases no active lesions may be present at the time of consultation, and the diagnosis must be made from the history, and the absence of signs of other itching affections, such as scabies or prurigo. The prognosis is good as regards each attack, but in relapsing cases depends upon the discovery and removal of the cause.

Give the Treatment of Urticaria.

In an acute attack a saline purge should be given at the outset, with gastric sedatives, such as Bismuth, if necessary. Locally, calamine lotion, or a dusting-powder of equal parts of talc and starch, with 2 per cent. camphor. Ointments most often irritate. In chronic cases close search should be made for a cause, and any found removed. Focal sepsis may be found in teeth, tonsils, nasal sinuses, or elsewhere. The digestive tract may need attention. Where attacks are of daily, or almost daily occurrence, focal sepsis is a likely cause, and where they are at longer and irregular intervals, a food-protein may be responsible. The keeping of a meticulously accurate and complete record of everything ingested may yield a clue, and any food suspected should be removed from the diet, and if then the attacks cease, the experiment should be made of giving the food again. The cutaneous tests with food-proteins are on the whole disappointing, but are worth a trial in difficult cases. Autohæmotherapy often helps greatly, and quinine internally sometimes succeeds. Calcium is most often useless.

Give an Account of Papular Urticaria.

This disease, known also as lichen urticatus, is simply chronic urticaria occurring mostly in young children. The lesions

are papular, sometimes with a small vesicle surmounting the papule, and are seen mostly on the extensor surfaces of the limbs, the sacral region, and the lower part of the abdomen. It appears in early infancy, and the onset is gradual. At first wheals appear, then the typical papules or papulo-vesicles. It comes out in successive crops, and may last for years, but tends to clear as the child grows up. The itching is intense, and scratching removes the tops of the papules, leaving punctate brown or blackish blood-crusts. Dermographism is present when the disease is active, and lichenification is common. Secondary infection is common, leading to impetigo, boils, etc. The general health is unaffected. The cause is that of chronic urticaria. The diet should be well-balanced, and the bowels regulated. A good mixture contains quinine bihydrobromide, gr. i, with sodium bromide, grs. i to iii, according to age. A complete change of scene often cures, with a strong tendency to relapse on the return home. Locally anti-pruritic lotions as for urticaria are indicated, and a tar ointment as for chronic eczema when there is lichenification.

What is Prurigo of Hebra ?

This condition has many points in common with the preceding disease, and is thought by some to be identical with it, only being neglected and persistent. The primary lesion is a small papule, which is pale, and felt more easily than seen. The areas affected are the same as in lichen urticatus, but in severe cases it is not uncommon for the whole body to be involved. The intense itching leads to scratching, pyodermia, and lichenification. The lymph-glands are enlarged, especially those in the groin. In the most severe cases, such as are scarcely seen in Britain, there is progressive undermining of the general health, and ultimately death ensues. The etiology is doubtful. It is not common to get positive skin-tests, and neither dieting nor attempts at specific desensitisation are likely to result in cure. Good results have been obtained at times from autohæmotherapy and other non-specific methods. Rest in bed and inunction of a 2 per cent. betanaphthol ointment often bring about a complete disappearance of the rash, but relapse is common whenever the patient resumes his ordinary mode of life, and treatment must be persisted in for a prolonged period if permanent cure is to ensue.

DRUG ERUPTIONS.

Describe the Principal Drug Eruptions.

Iodine compounds give rise to a pustular eruption, principally on the face, and less often on the chest. Chlorine externally may produce an acneiform rash. The bromine rash may resemble that due to iodine, but more typically there is a granulomatous development, so that the lesions are large and raised above the level of the skin, usually of a violaceous tint, and sometimes extensively ulcerated. They may have to be diagnosed from tuberculosis and syphilis, and here the history is important, while bromine may be found in the urine. The dose of bromide is sometimes very small, and the patient may be unaware that the preparation he is taking contains the drug. Suckling children may develop bromodermia when the mother is taking the drug, while certain soothing remedies in popular use contain it. A number of drugs cause urticaria in susceptible subjects. Aspirin is one of the worst offenders. Arsenic may cause an acute erythema, going on even to exfoliative dermatitis, but the most typical lesions are those of chronic arsenical poisoning—pigmentation, often of a peculiar guttate type, and hyperkeratosis, which may go on to carcinoma. The arsenic may be ingested in food or drink, or be taken medicinally, or be absorbed in some industrial process, such as the manufacture of weed-killer or sheep-dip. Many drugs cause an erythematous rash, as quinine, copaiba, belladonna, antipyrin, etc.

PURPURA.

What are the Varieties of Purpura ?

Symptomatic purpura is seen in severe blood diseases, as leukæmia, aplastic anæmia, and septicæmia, and also in scurvy, advanced phthisis, etc. Primary purpuras are purpura simplex, P. hæmorrhagica, and Henoch's purpura. The name purpura rheumatica has been given to a type in which there are joint-pains, but these are probably merely due to hæmorrhages into the joints. The essential lesion in all forms is a bright red macule, which becomes purple, does not disappear under pressure, may enlarge considerably, and slowly involutes with a play of colours like a bruise. In P. hæmorrhagica and Henoch's

purpura there are hæmorrhages from the mucous membranes, and, in addition, severe abdominal pains in the Henoch type. All these are almost certainly of toxic origin, but their precise cause is not known. Some cases show a diminution, or even complete absence of blood-platelets ("thrombopenic purpura"). The prognosis in all the primary types is good, but death has occurred in the hæmorrhagic and Henoch types from visceral or meningeal hæmorrhage, and they always give rise to considerable anæmia.

What is the Treatment of Purpura?

Rest in bed is essential. Any probable or possible cause should be dealt with. Calcium salts have been given with the idea of increasing the coagulability of the blood, and turpentine, ℥ ii-iii, dropped on to a lump of sugar, t.i.d. The best results have been got with injection of normal horse-serum, 5·0 to 10·0 c.c. intramuscularly daily, or 20·0 c.c. per rectum night and morning. In very severe cases transfusion of blood would probably be helpful. Splenectomy is a valuable measure in thrombopenic purpura, and should not be delayed until the situation is desperate. Recent reports indicate that its curative effect is not always permanent.

VESICULAR AND BULLOUS DISEASES.

Name the Varieties of Herpes.

Simplex; febrilis or labialis; facialis; genitalis; and zoster.

What are the Characters of Herpes?

It commences with the sudden appearance of grouped papules, which soon develop into vesicles, the fully-developed picture being a group of vesicles or small bullæ, closely set on an erythematous plaque. The onset is accompanied by pain, often of a neuralgic type, and this may persist long after the eruption has cleared up, especially in old people. The febrile variety occurs at the muco-cutaneous junction of the lips, while zoster follows the distribution of one or more nerve-roots. There is enlargement of the regional lymph-glands, even before the eruption is apparent.

What is the Etiology of Herpes?

All varieties, except zoster, are due to a filter-passing virus. The cause of zoster has not yet been determined, but there is always a lesion of the corresponding posterior root-ganglion, and chronic arsenical poisoning seems to predispose to the disease. A second attack of zoster is rare, while the other types have a definite tendency to relapse. Some cases, at least of herpes zoster, are due to the virus of varicella.

Discuss the Diagnosis, Prognosis, and Treatment of Herpes.

The fully-developed picture of herpes is unmistakable, and the only likely mistake in diagnosis is when the pain precedes the rash. It may be called "rheumatism," "sciatica," or "neuritis," if in a limb, while the abdomen has been opened on occasion because some acute catastrophe was diagnosed. Pleurisy also may be simulated. The enlargement and tenderness of the regional lymph-glands may give the clue in difficult cases. The prognosis is good in the main, but supraorbital herpes may be associated with keratitis, ending in loss of sight. The recurrent types are annoying, and freedom from relapse cannot be promised. As already mentioned, there may be persistent pain in the aged. Treatment is of slight value. Occasionally painting with 2 per cent. nitrate of silver in spt. æth. nitr., or with 1 per cent. menthol in spirit seems to abort a case, but it is difficult to be sure of this. A dusting-powder (5) is a good local application, and 1 per cent. ammoniated mercury ointment may be used in secondarily infected cases. Analgesics may be required.

Describe Dermatitis Herpetiformis.

This disease, also known as Duhring's disease, is rather uncommon, but important to bear in mind, as it is frequently misdiagnosed. It presents a polymorphous eruption—papules, vesicles, bullæ, and pustules—with a variable tendency to the formation of herpes-like groups of vesicles on erythematous plaques. It affects chiefly the face, the extensor surfaces of the limbs, the shoulders, and over the sacrum and trochanters. It comes out in successive crops, and occasionally malaise and slight pyrexia precede the outbreak. The buccal mucosa may

be affected. Itching is variable, but usually intense. Occasionally it may be replaced by burning, or actual pain. The lesions leave pigmented stains, and the fresh lesions tend to group themselves round these stains. Scratching leads to secondary pyodermia and lichenification. There is an excess of eosinophiles both in the circulating blood and in the actual lesions. The disease may occur at any time of life, and a definite group of cases is associated with pregnancy. The etiology is unknown.

Discuss the Diagnosis, Prognosis, and Treatment of Dermatitis Herpetiformis.

The diagnosis from pemphigus is difficult at times, but the following points are helpful. In pemphigus the bullæ arise from apparently normal skin, in D. herpetiformis on an erythematous basis. Itching is slight or absent in pemphigus, severe in herpetiformis. The buccal mucosa is often affected in pemphigus, rarely in herpetiformis. There is absence of the typical herpetiform grouping of the lesions in pemphigus, and the lesions are all of one type. Pemphigus undermines the general health, herpetiformis does not. Eczema shows only a superficial resemblance. Its vesicles are small and rupture early, those of herpetiformis are firm and do not readily burst, while there is no grouping of the lesions in eczema. Bullous erythema multiforme may closely resemble herpetiformis, but lesions typical of one or other can generally be found. The palmar and mouth lesions in the erythema in particular are often diagnostic. The prognosis is good as regards life, and doubtful but not hopeless as regards freedom from recurrence. Cases in young children generally recover completely, as do those occurring during pregnancy. The sheet-anchor in treatment is arsenic, which should be pushed until either the rash is controlled or the limit of tolerance is reached. Rest in bed is very helpful, as is a holiday. In severe cases in pregnancy it may be advisable to empty the uterus. Local treatment is of secondary importance. Calamine lotion relieves the itching, and sulphur ointment sometimes does well. Patches of lichenification will yield to X-rays or Milian's tar paste (4).

Describe Hydroa Vacciniforme.

This is a bullous disease seen in children, mostly boys. It is due to sensitisation to actinic rays, the sensitising agent being certainly in some cases and probably in all hæmatoporphyrin. Bullæ appear on the face and to a less extent on the hands or other uncovered parts, and form scabs, which, when they fall off, disclose fine vaccinia-like scars. The disease generally dies out about puberty. There is no treatment other than protecting the patient from the sun as much as possible.

Describe Epidermolysis Bullosa.

This is a congenital condition, due to a defect in the elastic tissue of the skin. It is observed as a rule shortly after birth, but may rarely not become apparent until much later in life. Bullæ appear in response to very slight trauma, frequently become septic, are long in healing, and are followed by atrophy. The nails are often atrophied. Epidermal cysts are often seen in the scars. There is no treatment.

What Varieties of Pemphigus are there ?

Vulgaris ; acutus ; foliaceus ; and vegetans.

Give an Account of Pemphigus Vulgaris.

This is a chronic disease characterised by the sudden appearance of bullæ, often large, generally not very numerous, arising from apparently normal skin. The mucous membranes are often affected. The general health is little affected at first, but gradually becomes undermined in persistent cases, and death may ensue after months or years, generally from some intercurrent condition, such as broncho-pneumonia or gastro-enteritis. Sometimes in more acute cases there are pyrexia and malaise preceding each fresh crop of bullæ. There is eosinophilia in the blood and fluid from the vesicles. The etiology is unknown. The diagnosis from dermatitis herpetiformis has been dealt with under that disease. The only other disease likely to give trouble is bullous impetigo, in which the rapid response to local treatment will decide the point. The prognosis is bad, but recovery is not unknown, and even in fatal cases there may be long remissions. As to treatment, arsenic has

often a restraining influence on the disease, and should be given in full doses. Treatment otherwise is symptomatic, continuous baths being very useful in severe cases.

Give an Account of Pemphigus Acutus.

This is an acute affection seen most often in butchers. There are very severe constitutional symptoms, with an eruption of bullæ. Death generally ensues in three or four weeks, but rarely recovery may take place, or the diseases may pass into the chronic form. Treatment is purely symptomatic.

Give an Account of Pemphigus Foliaceus.

The primary lesion here is a very flaccid bulla which ruptures early, leaving the deeper layers of the skin denuded. The bullæ come out in great numbers, and usually the whole skin surface is involved, but not the mucosæ. The dried roofs of the bullæ are shed in profusion as scales, the hair and sometimes the nails are lost, and there is a characteristic odour. It is possible with the finger to slide the outer layers of the apparently sound skin over the deeper layers, this being known as Nikolski's sign. The disease may last for many years, but is practically always fatal in the end. Treatment is symptomatic.

Give an Account of Pemphigus Vegetans.

This commences like vulgaris, often with mucous membrane lesions, but vegetations develop in the flexures. It is fatal, usually in a few months to a year and a half, and treatment is of no avail.

ECZEMA OR DERMATITIS.

What is Dermatitis ?

A catarrhal inflammation of the skin, due to the action of some irritant on it, the irritant reaching the skin commonly, though not necessarily, from the outside.

Does Eczema differ from Dermatitis ?

Eczema is a subdivision of dermatitis, in which there is an element of allergy (see below).

What are the Symptoms of Eczema ?

There is itching, with or without burning. Occasionally mild constitutional symptoms at the outset of an acute attack. Papules, vesicles, or papulo-vesicles appear on an erythematous basis. In more chronic cases parakeratosis leads to the formation of scales. The vesicles rupture early and easily, leaving the basal layers denuded. The margins of the affected area are ill-defined, with numerous outlying lesions. In old-standing cases there is thickening and lichenification of the skin. The vesicles are usually small and close-set, but occasionally on the hands or feet quite large bullæ appear, this constituting the condition known as cheiropompholyx. These larger bullæ readily become pustular. Parakeratosis and lichenification lead to fissuring at the flexures. Scratching leads to excoriations and secondary pyodermia. Different stages often co-exist.

Discuss the Etiology of Dermatitis.

Most cases are due to external irritation. The more sensitive the skin, the slighter the irritation necessary to provoke a reaction. This sensitiveness may be general, but is more commonly specific. The irritant is most often chemical, and attacks the skin in the course of work or hobby. The commonest of all is soap and water, the victims being women engaged in domestic or similar work, and the parts affected being the hands. Photographic chemicals ; sugar ; oils ; dyes, especially paraphenylenediamine, in hair-dyes and furs ; various woods, especially mahogany and teak ; cement ; acids ; red-lead are only a few of the substances known to cause dermatitis. Many plants are occasional causes, such as primula obconica, poison-ivy, bulbs, and chrysanthemums. Physical agents such as actinic rays, friction, and frequent wetting and drying may give rise to dermatitis. Seborrhœa is a predisposing cause, as are both xerodermia and excessive sweating. Treatment may produce dermatitis, or aggravate a pre-existing one. For instance, over-treatment of scabies with sulphur ointment may cause dermatitis, as may antiseptics, such as carbolic and picric acids, and iodoform. Septic discharges from one of the orifices of the body are other possible causes. Many cases of recurrent dermatitis of the hands and feet are due to fungus-infection. Any substance

suspected should be tested on an uninflamed area of the patient's skin. A piece of white linen about one inch square is soaked in a 1 per cent. solution, and applied as a wet-dressing. Insoluble substances can be applied direct. A positive reaction is papulo-vesicular.

How does Eczema originate ?

Usually from dermatitis, but occasionally from other forms of damage to the skin, such as burns or septic lesions. It is probable that a substance is formed in the inflamed skin, absorption of which sensitises the patient, with the production of an eruption, which usually comes out symmetrically, the face, bust, forearms and thighs being the commonest sites, though no part of the body is exempt. The eruption is papulo-vesicular, and is identical with dermatitis, due to direct external irritation. As further absorption takes place from these new areas, the disease tends to perpetuate itself through a vicious circle. This conversion of dermatitis into allergic eczema accounts for the failure of many cases of occupational dermatitis to clear up when work is stopped.

Discuss the Diagnosis of Eczema.

This is best taken in stages. In the stage of erythema, rosacea may be differentiated by its chronicity, the history of flushing, and the large size of the papules, but remember that dermatitis may be superimposed upon rosacea. In scarlatina the throat and tongue are characteristic, there are pyrexia, malaise, and a pulse-rate raised out of proportion to the temperature, while itching is as a rule absent. In measles the catarrh and conjunctivitis are distinctive. In the vesicular or bullous stage, erysipelas may be diagnosed by its brawny hardness, the pyrexia and general disturbance, and by its sharp margin, that of eczema being as a rule much less well defined. The characteristic grouping of herpes should suffice to prevent confusion. Pediculosis capitis may give rise to an eczematoid eruption, but the pediculi or their ova can easily be found. In ringworm of the smooth skin the patch is usually well defined, has a vesicular or pustular border, and tends to clear in the centre. Direct microscopic examination, or better culture, will reveal the causal fungus. In scabies, secondary dermatitis, either from

over-zealous treatment or from scratching and sepsis, is common, and the important thing is not to miss the scabies. The diagnosis of dermatitis herpetiformis has been given under that disease. In the pustular stage, impetigo contagiosa may be distinguished by the discrete lesions, with sound skin between. In impetiginised eczema the skin between the crusts shows the close-set papules or vesicles of eczema. In sycosis the eruption is confined to the hairy parts of the face, and the pustules are all follicular, many are pierced by a hair, and the affected hairs may be pulled easily with forceps, and exhibit a characteristic gelatinous-looking root-sheath, which is infiltrated with leucocytes. In eczema the lesions are neither all follicular nor confined to the hairy parts, nor do the hairs epilate easily, but remember that sycosis and eczema may co-exist. In the papular stage prurigo may be diagnosed by the pale colour of the papules, the predilection for the extensor surfaces, and the enlargement of the lymph-glands. In lichen planus the papules are angular in outline, flat-topped, infiltrated, and with a waxy sheen ; those of eczema are roughly circular, conical, and usually in some place vesicles are present. Squamous eczema may be distinguished from lupus erythematosus by the absence of scarring and of the peculiar, closely adherent, mortar-like scales seen in the latter ; from the squamous palmar syphilide by close study of the early lesions, which in the eczema are vesicular, and in the syphilide are granulomatous, and situated under the skin. Squamous eczema of the hands is generally occupational, and the right hand is generally more affected than the left in right-handed persons, and affection of the left alone, or to a greater extent than the right, may suggest the advisability of doing the Wassermann reaction. Tinea cruris may be diagnosed by its sharp margin, its bright pink colour, and the presence of the epidermophyton in the scales. Psoriasis also has a sharp margin, a predilection for the extensor surfaces, and its scales are of a dry and silvery nature. It does not itch if uncomplicated, but is liable to secondary eczematisation, especially in seborrhœic subjects, and as a result of treatment. Psoriasiform seborrhœic patches are yellower and greasy-looking, and have a predilection for the middle line of the body and the flexures. When generalised, eczema may have to be diagnosed from exfoliative dermatitis, in which the eruption is mostly dry, the skin is of a uniform dull redness,

and the scaling is almost unbelievably profuse. In the prodromal stage of mycosis fungoides there may be patches of intensely itching, very intractable, markedly infiltrated dermatitis, and in order to make a diagnosis it may be necessary to make microscopic sections, or to test the reaction to X-rays, which often clear the premycotic condition in a dramatic manner.

What is the Prognosis in Eczema ?

Good in the main, but it may be bad if the cause cannot be discovered or removed. A few cases are never cured. The older the patient, the worse the outlook. Even under the most favourable circumstances a considerable percentage of infantile cases resist treatment, but most of these clear up in time. The worst cases can always be much ameliorated.

Discuss the General Treatment in Eczema.

Attend to constipation and to any gastric or intestinal condition which may be present. Indicanuria may be found, in which case laxatives or intestinal antiseptics such as salol or dimol may be given. The diet should be regulated according to any evidence found of carbohydrate or protein fermentation, and alcohol, strong or hot tea and coffee, sauces and condiments should be forbidden. In chronic cases achlorhydria may be found, and should be treated by large doses of HCl, while in acute cases, especially of the type due to hypersensitiveness to bacteria, large doses of alkali, given until the fasting urine is neutral, will be found to act well. Flush the kidneys, but avoid diaphoretics. For pruritus, bromides and cannabis indica may be given. In debilitated cases iron, phosphorus, and cod-liver oil may do good, and in very chronic scaly cases arsenic is indicated. Autohæmotherapy and protein-shock treatment are both worth trying in difficult cases.

Discuss the Local Treatment of Eczema.

In the acute stage aim at excluding stimuli. Continuous starch-poultices are one of the best means of accomplishing this, and where there is much infection, acriflavine 1 in 2000 or 4000 may be added. An antipruritic lotion such as lot. plumbi et picis (2) may be used to bathe the parts at each change.

Wet-dressings of white lint, soaked in a solution of tannic (1·0 per cent.) and salicylic (0·1 per cent.) acids are particularly good in the acutest stages, and a cream of equal parts of zinc oxide and olive oil, with 2 per cent. of salicylic or boric acid, is valuable in the less acute. If there is not too much exudation, and also to enable the patient to continue his business in less severe cases, calamine lotion may be dabbed on several times a day, and allowed to dry. Watch should be kept for cracking, in which case a cream should be applied once or twice a day. This method is not suitable for parts covered with hair. Painting with 1·0 or 2·0 per cent. $AgNO_3$ is occasionally useful in acute weeping cases. Later, pastes should be used, a layer of butter-muslin being placed between the paste and the skin, and a lotion being used at each change of dressing. Refrigerant creams and liniments are intermediate between lotions and pastes, and the linimentum ichthyol et calaminæ (3) is very valuable. Unna's zinc-gelatine paste, which is melted and painted on, has many supporters. In the later stages of an acute attack, and in chronic cases, stimulating remedies may be applied in gradually increasing strength. For example, salicylic acid may be added to the zinc paste, commencing with grs. v to grs. x to the ounce, and increasing to grs. xxx. Tar preparations are very valuable at this stage, and a large number are in use. Milian's tar paste (4) is one of the best, and often acts almost like a charm, particularly in infantile cases. X-ray treatment also is of the very greatest value in chronic eczema, its properties of allaying itching, promoting healthy cornification, and causing the disappearance of infiltration, finding here a fertile field. Ultraviolet light, as from a mercury-vapour lamp, has been used for eczema, but the results are in no way comparable to those obtained with X-rays.

Does Eczema in Infants differ from that in Adults ?

Not essentially. The primary lesion is an area of irritation, as from imperfect hygiene of the napkin-area ; seborrhœic or streptococcal infection of the scalp ; or papular urticaria. In each case scratching sets up dermatitis, and this through absorption sets up allergy, and eczema is the result. As in the adult, the patient is allergic to this product of his own tissues, rather than to the original irritant, so that little benefit can

be expected from dieting. Effective local treatment is radical, as it cuts off the supply of the allergen, but of course the child is still open to a repetition of the whole process, if the original cause is allowed to continue. The 20 per cent. coal tar paste often acts like a charm. It should be kept continuously applied, and the child restrained from scratching. The acute phases should be treated precisely as in the case of adults. The ultimate prognosis is good, though relapse may try the patience of doctor and parents.

DISEASES CHARACTERISED BY SCALING, WITH OR WITHOUT LICHENIFICATION.

What Diseases are included in this Group?

The psoriasiform diseases—psoriasis, parapsoriasis, pityriasis rosea, and seborrhœa—the erythrodermias, and the lichens.

Describe Psoriasis.

Psoriasis is a chronic disease characterised by the appearance of erythematous macules, surmounted by imbricated, silvery-white scales. Occasionally the macules may develop into low, flat papules. They tend to enlarge, and often clear in the centre as they extend, thus forming rings and gyrate figures. The scales may be comparatively scanty or may be abundant and heaped-up, but are always dry, unless secondary eczematisation has occurred. If a lesion be scraped, the silvery character of the scales becomes more apparent, and if the scraping be continued until all the scales have been removed, a thin sheet—the "membrane of Bulkley"—is disclosed, removal of which reveals one or more minute bleeding points, which represent the enlarged and engorged papillæ. The eruption shows a preference for the extensor aspects of the limbs, the sacral region, behind the trochanters, and the scalp, but no part of the body is immune. The palms are most often free, but involvement of both palms and nails is not at all uncommon. It is doubtful if the mucous membranes are ever affected, but the glans penis is an occasional site. Occasionally the whole skin-surface becomes involved, when the condition becomes an

erythrodermia. This development frequently, if not invariably, depends upon an associated seborrhœa, and may be precipitated by too vigorous treatment. Itching is not present as a rule, but may be found in acute cases or where secondary eczematisation has occurred. Psoriasis is essentially a relapsing disease, typically appearing freshly at more or less regular intervals, and involuting wholly or partially in between. The first attack comes commonly between the ages of ten and forty-five, but younger and older cases are not rare. The patients are generally in good health otherwise, but in severe cases, and especially where erythrodermia had supervened, there may be considerable debility. The etiology is quite unknown.

Discuss the Diagnosis of Psoriasis.

The diagnosis from seborrhœa may be very difficult. Seborrhœa has a preference for the flexures and the mid-line of the trunk, while psoriasis prefers the extensor surfaces; both affect the scalp, but psoriasis there is generally in discrete patches, while seborrhœa is diffuse. Seborrhœa has a tawny tinge, and the scales are yellowish and greasy-looking, and on scraping them away serum is seen exuding. Single patches of either condition may be almost indistinguishable, but in most cases typical lesions will be found somewhere on the body. The sharp definition of the lesion of psoriasis will generally serve to distinguish it from eczema, as will the absence of itching, and difficulty only arises when there is eczematisation on top of psoriasis. Here the history, the distribution, and probably the existence of typical lesions elsewhere will give the clue. The squamous secondary syphilide may superficially resemble psoriasis, but the base of the lesion is infiltrated, the scaling is comparatively scanty, and there is not the characteristic series of appearances on scraping, while the presence of mucous-membrane lesions, general enlargement of the lymph-glands, and other signs of syphilis, such as the Wassermann reaction, should put the matter beyond doubt. In lichen planus the primary lesion is a flat-topped papule, and larger patches are only formed by the confluence of a number of these, and isolated papules can generally be seen at the periphery. Lichen is usually very itchy, and in about half the cases there are lesions on the buccal mucosa. The scaling is never so abundant or so

silvery as in psoriasis. In pityriasis rosea the scaling is very fine, and the colour is pink, and the scalp and distal parts of the limbs are seldom affected.

What is the Prognosis in Psoriasis ?

There is practically no danger to life, and the general health is, as a rule, unaffected. The eruption can in most cases be caused to disappear if treatment is thorough, but relapse is the rule, and the period of freedom can never be foretold. It may be only a week or two, or may be some years, while rarely there may be no relapse.

Give the Treatment of Psoriasis.

Alcohol should be avoided, and tea and coffee taken in moderation, and neither hot nor strong. There is little otherwise in dieting. A great variety of drugs have been used, but only arsenic, thyroid-gland, and the salicylic compounds are worth considering. Arsenic is given as a rule only in chronic cases where the rash is stationary, and should be given in full doses until an effect is obtained or there is intolerance. Thyroid acts well in a few cases, but must be used very cautiously, and frequently relapse ensues as soon as it is stopped. Salicin, in doses of from grs. xv to grs. xxx t.i.d., is sometimes useful in acute cases, and sodium salicylate by intravenous injection, 12·0 c.c. of a 20 per cent. solution thrice a week, has been curative in a fair proportion of cases. Protein-shock treatment has also sometimes succeeded. Local treatment should always be used in addition to general. There are two main indications, to remove scales and to promote hyperæmia, or even a mild dermatitis. The chief drugs are chrysarobin, salicylic acid, pyrogallic acid and its derivative eugallol, alkalies, phenol, and tars. Chrysarobin is the most efficacious, but should in the main be confined to patients who are in bed, as conjunctivitis, nephritis, and exfoliative dermatitis have been known to follow its use. Cignolin, which is synthetic chrysarobin, minus one methyl group, is almost five times as active as natural chrysarobin, and much less toxic. It can be used on the head. The patient should take an alkaline bath, and remove scales by scrubbing, and, after drying, the ointment should be thoroughly rubbed in, care being taken to avoid the face,

This should be repeated once or twice daily until the sound skin is a deep red colour, and the psoriasic patches stand out comparatively white. For the face and scalp, and for cases treated outdoor, milder ointments should be used (6 and 7). A paint of eugallol, 10 per cent. in acetone, is clean, and sometimes effective, while, on the face, a 4 per cent. ammoniated mercury ointment is good. Many cases are cleared by exposure to sunlight or the mercury-vapour lamp, but by no means all. X-rays will generally clear any given patch, but cannot be used indefinitely, and most authorities use them very little. They are perhaps most useful in obstinate scalp cases and chronic infiltrated patches.

What is Seborrhœa ?

A chronic superficial dermatitis, characterised by redness, scaling, and a varying degree of œdema of the skin. The redness has a tawny tinge, and the scales are yellowish. It shows a preference for the parts where the sebaceous glands are largest and most numerous, such as the scalp, the eyebrows, the naso-labial furrows, the beard-region in the male, the flexures, the sternal region, between the scapulæ, the umbilicus, and over the sacrum. It is a very common affection, is very varied in its appearances, and frequently coexists with, and modifies, other dermatoses. It is, however, a definite inflammatory disease, and not a mere tendency or diathesis.

How would you classify the Seborrhœides ?

The dry, exemplified by simple pityriasis capitis, in which the scales are dry and loose, and fall readily, while the hair-growth is not impaired ; the greasy, exemplified by greasy seborrhœa capitis, in which the scales are adherent, and a progressive thinning of the hair results, and by the papular and psoriasiform seborrhœides of the glabrous skin; and, lastly, the crusted, oozing, and infected type, or true seborrhœic eczema.

Describe the Papular and Psoriasiform Seborrhœides.

The papular seborrhœide is often follicular. The papules are the typical tawny red, and are capped by the typical yellowish scales. Large patches may be formed by the coalescence of these papules. The psoriasiform type consists of sharply defined patches, with the same characters of colour and scali-

ness. It is seen most often on the trunk, in the mid-line, and in the flexures. The patches may clear in the centre, forming circles and gyrate figures. There is little or no itching.

What is the Etiology of Seborrhœa ?

It is almost certainly an infection with the monilia-like organism known as pityrosporon of Malassez. In the dry stage this organism is found almost in pure culture, and in the greasy stage it is associated with staphylococcus albus. In the acute, weeping stage streptococci also are present, and indeed many cases of so-called acute seborrhœic eczema are really streptococcal. The activity of the sebaceous glands is a factor, as is shown by the higher incidence of seborrhœa at puberty, and in males. Lack of cleanliness is another factor in some cases.

Discuss the Diagnosis of Seborrhœa.

Pityriasis capitis may be distinguished from ringworm by its being generally diffuse, while tinea is as a rule in well-defined patches. In tinea the hairs are often distorted, and break on being pulled with forceps. There is little redness with microsporon tinea, and the fungus is easy to demonstrate. The diagnosis of the psoriasiform seborrhœide from psoriasis has been discussed under the latter disease. Pityriasis rosea may closely resemble the seborrhœide, but it is not confined to the flexures ; there is often a history of one patch having preceded the widespread eruption by a week or ten days, and the patches are more even in size, and are arranged with their long axes along the lines of the ribs. Tinea cruris is generally confined to the groin, has a bright pink colour, with very fine scaling, and itches intensely, while the epidermophyton can be found.

What is the Prognosis of Seborrhœa ?

The individual lesions usually yield readily to treatment, but the tendency to recurrence is very persistent. Exfoliative dermatitis is an occasional severe complication.

What is the Treatment of Seborrhœa ?

In all but acutely catarrhal cases wash frequently, using a sulphur or tar soap, or the preparation known as Sulphaqua, which liberates nascent sulphur in the bath. Ointments are

the best applications, and may contain salicylic acid, resorcin, sulphur, tars, and mercurials (8 and 9). On the scalp the hair should be cut close, and an ointment applied continuously, or at least well rubbed in night and morning. In milder cases lotions are more expedient, though much less efficacious (10 and 11). Chronic infiltrated patches may require X-rays. The acute seborrhœic eczema is to be treated as an ordinary eczema at first, flavine starch poultices being very useful, and later anti-seborrhœic ointments are to be used with caution, the strength being gradually increased.

Give an Account of Pityriasis Rosea.

This is an acute macular or maculo-vesicular disease, which is probably an exanthem. In the majority of cases there is a "herald-spot," which appears anywhere on the trunk or upper portions of the limbs as a pink macule, which gradually enlarges. After one or two weeks a profuse eruption of similar macules covers the regions named, the face, except sometimes the chin, and rarely the temples, and the distal parts of the limbs escaping. As the spots enlarge they tend to clear in the centre, the developed picture being a pink ring, round or oval, with the long axis in the line of the ribs, covered with a frill of fine scales, and enclosing a buff-coloured, wrinkled centre. Itching is variable, being sometimes very severe, and sometimes absent. Scratching may lead to eczematisation. The duration untreated is from three weeks to three months, and there is no tendency to recurrence. Its cause is probably a filter-passing virus. The fully-developed disease is unmistakable, but seborrhœa or eczematisation may obscure the picture, and then the distribution and the history of a "herald-spot" may give the clue. In the early macular stage the condition is not very seldom mistaken for the macular secondary syphilide, but the distribution, the absence of general glandular enlargement, of mucous membrane lesions, of a primary sore, of general disturbance, and of a positive Wassermann reaction in cases of doubt, should prevent this rather serious error. The prognosis is good, and treatment is of doubtful value as regards shortening the duration, but where there is itching, calamine lotion will soothe this and prevent eczematisation.

THE ERYTHRODERMIAS.

How would you classify the Erythrodermias ?

Into primary, secondary, and prodromal classes. The primary includes dermatitis exfoliativa of Erasmus Wilson, pityriasis rubra of Hebra, D. exfoliativa epidemica of Savill, and certain infantile forms. The secondary includes cases complicating eczema, psoriasis, seborrhœa, lichen planus, and pityriasis rubra pilaris. The prodromal form occurs in mycosis fungoides and leukæmia.

Give an Account of Dermatitis Exfoliativa of Erasmus Wilson.

It commences as red freely-scaling patches, usually in the flexures, and spreads fairly rapidly, so as to involve most or all of the skin-surface. The skin is bright red at first, later of a coppery hue, and the scales are very large and often almost incredibly abundant. The hair may fall, including the eyebrows and lashes. The nails become brittle and discoloured, and may fall. The general health is remarkably little impaired, but the patient is very sensitive to changes of temperature. There is as a rule not much itching, and the skin does not atrophy. The course is very chronic, with intermissions and relapses, but recovery is the rule after months, or a year or two. Death may supervene from respiratory trouble, gastro-enteritis, or septicæmia. The etiology is unknown, but many, if not all, the patients suffer from seborrhœa, and this is probably at least a predisposing cause. The diagnosis of erythrodermia is easy, but it may be difficult to exclude the prodromal forms, at any rate early in the illness. From P. rubra of Hebra it is distinguished by the absence of general symptoms, and of itching and weeping and glandular enlargement. A blood examination will exclude declared leukæmia. The history will distinguish the primary from the secondary forms. In treatment rest in bed is essential, with a supporting and non-irritating diet, and only soothing applications should be used locally, such as calamine liniment, carron oil, soft paraffin, or boric ointment.

How does Pityriasis Rubra of Hebra differ from Dermatitis Exfoliativa ?

In the following ways. The general health suffers, there being progressive asthenia ; there is general enlargement of the lymph-gland ; itching is severe ; the skin becomes atrophied ; there are no remissions, and the disease is always fatal.

Give an Account of the Secondary Erythrodermias.

These occur as complications of eczema, psoriasis, seborrhœa, lichen planus, and pityriasis rubra pilaris. They are clinically similar to the primary (Wilson) exfoliative dermatitis, but the prognosis is better, both as regards the ultimate outcome and the duration.

Discuss the Prodromal Erythrodermias.

Erythrodermia may precede blood-changes in lymphatic leukæmia, and is then usually rather of the Hebra type, with severe itching. Examination of the blood at regular intervals may reveal a gradual move of the differential count to the lymphatic side. Some cases of mycosis fungoides have commenced as erythrodermia. A dose of X-ray to a small area might be given as a test in a doubtful case, as this generally results in complete temporary disappearance of the premycotic condition, and may also help in leukæmia. X-ray externally, and arsenic internally, are the only treatments of any avail in both diseases, and their effects are only temporary.

THE LICHEN GROUP.

Give an Account of the Clinical Features of Lichen Planus.

This is a not very common disease, but there is little doubt that a number of cases are missed. It is characterised by the appearance of yellowish to purple, most often lilac papules, which are angular in outline, flat-topped, steep-sided, with a peculiar waxy sheen, and often surmounted by a single adherent scale. These papules coalesce to form raised, scaly patches, on which there can often be seen a fine whitish tracery, the " striæ of Wickham." There is usually intense itching. The onset is most often gradual, but may be acute. The commonest sites

are the fronts of the wrists and forearms, the backs of the hands, the back of the neck, the sacrum and flanks, and the fronts of the legs immediately above the ankles. The scalp, face, and front of the neck generally escape. The glans penis, scrotum, and the buccal mucosa are often affected. Sometimes the papules fuse to form rings (L. annularis) or streaks like strings of beads (L. moniliformis). Varieties include the hypertrophic, in which firm, purplish, often irregularly warty, markedly raised plaques are formed, generally on the legs ; the atrophic, in which scarring takes place ; the rare bullous ; and perhaps lichen obtusus corneus, in which the lesions are large dome-shaped nodes, up to a marrowfat pea in size, scattered over the lower extremities, and associated with intense itching. The course of the disease is very chronic, and in general the more acute the onset, the shorter the probable duration. On involution the rash leaves pigmented stains. The etiology is unknown.

Discuss the Diagnosis of Lichen Planus.

Most cases are so characteristic that they cannot be mistaken for anything else, at any rate by an observer who has even once seen the disease. The papules of chronic eczema are rounded in outline, and some part of the eruption is almost certain to be moist. From psoriasis the scaly patches may be distinguished by the fact that they are composed of aggregated papules, while isolated papules may be seen at the periphery, and the striæ of Wickham are pathognomonic, if present.

What is the Prognosis of Lichen Planus ?

Good as regards ultimate recovery. Most cases of the common type recover in from six weeks to as many months, and relapse is not very common. The hypertrophic type is more chronic, and often shows no tendency to spontaneous cure, while it may be refractory to ordinary treatment. It will generally, however, be found to yield to some form of treatment.

What is the Treatment for Lichen Planus ?

Internally arsenic and mercury are both efficacious, and they may be combined, as in Donovan's solution, of which ℥ .v to ℥ .x t.i.d. may be given. Externally, anti-pruritic ointments are indicated, and mercurials may be included. A good oint-

ment contains Ac. carbol. ℥ss .v and Hydrarg. ammon, grs. v in ℥i of Ung. zinci or Ung. lanolini. X-rays generally clear the common type, but often fail with the hypertrophic, which may then be cured by fairly deep freezing with CO_2 snow (from 30 to 60 seconds). Withdrawal of cerebro-spinal fluid by lumbar puncture may be followed by cure of lichen, and in an acute case this method is worth considering.

Give an Account of Pityriasis Rubra Pilaris.

This, also known as lichen ruber acuminatus, is a chronic disease, characterised by the appearance of conical, brick-red, scaling, follicular papules, first, and most typically, on the backs of the fingers and hands, and by a very typical red coloration and fine branny scaling of the face and scalp. There is moderate itching, with a feeling of tightness, and the patients are sensitive to cold. The nails are discoloured, and may fall, as may the hair. In long-standing, severe cases there may be general enlargement of the lymph-glands, and impairment of nutrition. The disease starts suddenly or gradually, progresses, remits, and recrudesces. Each recrudescence tends to be worse, but complete recovery is not unknown, and there may be long periods of freedom. Erythrodermia is an occasional complication. Diagnosis is easy, except in a generalised case, where there are no longer any of the characteristic brick-red conical papules, and the history may be the main indication. Treatment is not satisfactory, but intensive arsenical therapy is the best hope. Small doses are valueless. Thyroid may also be tried. Injections of pilocarpine have occasionally seemed to do good. Locally bland ointments, perhaps with Ac. salicyl., 1 or 2 per cent., are helpful, and X-rays may be tried.

What is Lichen Simplex Chronicus?

This condition, known also as neurodermatitis and lichenification, is an intensely itching eruption, papular at first, and later in the form of a plaque or plaques formed by aggregations of papules. The papules are pale red to violaceous in colour, and the plaques are moderately raised, and are marked by criss-cross lines, the pattern being an exaggeration of the normal markings of the skin. The sites of election are the anti-cubital regions, the popliteal regions, and the nape of the neck. It is

still in dispute whether the primary condition is a pruritus, the lichenification being produced by scratching, or whether the lichenification is primary. It is commonest in middle-aged women, and is very rebellious to ordinary treatment, but will generally yield to X-rays.

PARASITIC AND INFECTIVE DISEASES.

What are the Clinical Characters of Scabies ?

Scabies, or itch, is a contagious disease characterised by intense itching, worse at night, and is due to the itch-mite, acarus scabiei, which burrows into the skin. The sites of election are the interdigital regions, the wrists, the anterior folds of the axillæ, the mammæ in the female, the groin, the insides of the thighs, and the penis in the male. Especially characteristic is involvement of the skin over the ischial tuberosities. The primary lesion is the burrow, which is seen as a wavy grey or black line, ending in a small vesicle. Secondary lesions are due to scratching and infection, and range from excoriations through impetigo to boils, carbuncles, and abscesses. The face is not affected by the scabies, but may be by the secondary pyodermia. In cleanly patients typical lesions may be few or absent, but the nocturnal itching and the distribution are diagnostic.

What is the Etiology of Scabies ?

The essential cause is the itch-mite. The impregnated female burrows into the stratum corneum, where she deposits her eggs. The male acarus leads a short, free life on the surface, but seems occasionally to make a small burrow. Close and intimate contact is generally necessary for contagion, and the disease is thus largely either a family one, or else venereal. Infected clothing or bed-clothing are also important.

Discuss the Diagnosis of Scabies.

In children papular urticaria may be distinguished by its attacking only one member of the family, the occurrence of lesions on the face, and the absence of burrows, while the greater incidence on the extensor aspects, and the absence of

lesions on the penis will further help. In adults, pediculosis corporis affects principally the shoulders, chest, and sacral region, the burrows are absent, and there is often a characteristic pigmentation, while the pediculi or their ova may be found. In eczema the itching is not so definitely nocturnal, burrows are absent, and the face is likely to be involved in an extensive case, and other members of the family are unlikely to be similarly affected. Secondary eczematisation may occur in scabies, especially where sulphur has been applied to excess, and as this treatment may have removed all signs of active scabies, the history may be the only guide.

What is the Treatment for Scabies ?

The patient should take a hot bath morning and evening, scrubbing vigorously in order to open up the burrows, and after drying should rub an ointment of sulphur or beta-naphthol (12 and 13) thoroughly into the skin, paying special regard to the hands, feet, groin, and flexures, and leaving out the face and scalp. The ointment should be allowed to remain on the skin between the baths. This procedure should be carried out on each of three successive days, but no longer, and thereafter clean clothing should be put on, and every garment should be disinfected by boiling or steam. It is most important that every affected member of a family should be treated simultaneously, and that no article of clothing be omitted from the disinfection, as otherwise reinfection is to be expected. Various short-cut treatments have their advocates, such as fumigation with SO_2 and the use of liquor calcis sulphuratæ, but they are not reliable. In young children, and where there is much dermatitis, milder applications should be used (14), but disinfection should be just as thorough. The secondary pyodermia may require treatment long after the scabies has been cured, and if there is any doubt about the cure, the baths and inunctions may be repeated after ten days.

What are the Varieties of Pediculosis ?

Capitis, corporis, and pubis.

Describe Pediculosis Capitis.

This is seen commonly in children and old persons ; between those periods of life it is seen mostly in neglected invalids and

those of defective intelligence. The pediculi may be seen, or more often only the ova, which are attached to the hairs, particularly towards the occipital region. There is itching, and the resulting scratching produces impetigo or other pyodermia. In bad cases the hair may be matted with serum and pus, covered with ova, and swarming with active pediculi, there then being a characteristic heavy odour. The diagnosis is easy, the ova being unmistakable. In mild cases wet-dressings of 1 in 40 carbolic will cure, and the use of a fine-tooth comb, kept moist with vinegar, will remove the dead "nits." In severe cases the head must be shaved, and the pyodermia treated with 1 per cent. ammoniated mercury ointment. In all cases of impetigo of the face, pediculosis should be considered.

Describe Pediculosis Corporis.

This is seen most often in the aged, and in the tramp class. It is also a great scourge of armies in the field, refugee camps, and the like. The pediculi lay their eggs mainly on the clothing, but also to a considerable extent on the body hair. The lesions are in the main those caused by scratching, but the bites of the pediculi may be seen as minute petechiæ, and in severe cases there is a deep pigmentation of the body, extending rarely even to the mucous membranes. The sites most affected are the shoulders, the chest, and the sacrum. Weak mercurial ointments, or 1 in 40 carbolic lotion, are curative, provided that disinfection of the clothing and bedding is thorough, and that no ova be left on the body hair.

Describe Pediculosis Pubis.

This is seen commonly in adults, and is in the main a venereal disease, though innocent infection in a household, or through public lavatories, is not uncommon. It affects the pubic region, less often the axillæ, and only rarely in neglected children the eyelashes. Itching is intense, and secondary pyogenic lesions are common. Pathognomic are bluish marks on the lower abdomen, the taches bleuâtres of the French. In treatment it is important to avoid irritating applications—the popular blue ointment may cause a very unpleasant dermatitis—and wet-dressings of 1 in 40 carbolic, repeated a few times, will almost always cure. Shaving is most undesirable, as there is intense irritation when the new hair is growing.

FUNGUS INFECTIONS.

Name the Principal Skin Diseases due to Hyphomycetes.

Favus, the tineas (capitas, circinata, barbæ, unguium, cruris), pityriasis versicolor, erythrasma, actinomycosis, and sporotrichosis. To these must now be added the eczematoid forms of dermatomycosis.

What is Favus?

A chronic, contagious, intractable, scarring disease of the scalp, characterised by the presence of rounded, cupped, closely adherent, sulphur-yellow crusts, known as scutula. Removal of a scutulum shows the underlying skin to be depressed, atrophied, and in places denuded of epithelium. The hair falls, scarring ensues, and the end-result is a permanent cicatricial alopecia. Occasionally the smooth skin is involved, and the scutula may be few or absent, the lesion appearing as a red, raised, circinate patch, with a vesicular margin. Infection usually takes place in childhood, and the disease persists throughout life, in the absence of effective treatment. Common in many parts of Europe, it is seen in England mainly in immigrants. In Scotland it is not yet extinct as an indigenous disease, but fresh cases are now rare.

What is the Cause of Favus?

The achorion schœnleinii. Favus of the smooth skin is sometimes due to an achorion of animal origin, such as A. quinckeanum.

Discuss the Diagnosis of Favus.

In the presence of scutula no doubt is possible. If through treatment they have been removed, the cicatricial alopecia would exclude tinea or alopecia areata, and only folliculitis decalvans and lupus erythematosus would have to be considered. Here the presence of active folliculitis in the one, and the typical scales in the other, would give the clue, while in any case of doubt the finding of the fungus would be conclusive, and if the case were left untreated for a few days, it would be seen whether scutula appeared or not. The terminal alopecia left by all these conditions is indistinguishable.

What is the Prognosis of Favus?

It shows no tendency to spontaneous recovery, and resists all treatment other than with X-rays.

What is the Treatment of Favus?

Epilation with X-rays or with thallium, which may have to be repeated after an interval, is the only hopeful measure. On the smooth skin the disease is amenable to treatment with mild antiseptic ointments.

What are the Varieties of Tinea Capitis (T. Tonsurans)?

There are three—microsporon tinea, "black-dot" ringworm, and tinea profunda or kerion celsi.

Describe Microsporon Ringworm of the Scalp.

This is a disease of childhood, tending to die out spontaneously at puberty. It is highly contagious, being spread either by direct contact of children in play, or by wearing an infected cap, and also by infected combs and brushes. Another mode of infection is from the cushions of railway carriages. It takes the form of one or more roughly circular patches, which are slightly reddened, scaly, and over which the hair seems thinned. On close inspection some of the hairs will be seen to have broken off short, while others are twisted or distorted, and all or most have lost their lustre. On pulling with forceps one brings away the free part of the hair, leaving the root in the follicle. The patches are generally well-defined and discrete, but in severe cases they may by confluence involve most of the scalp. If an affected hair be pulled, mounted in liquor potassæ, and examined with the microscope, using a small aperture of the diaphragm, and a $\frac{1}{6}$-inch objective, it will be seen to be sheathed in a mass of the spores of the fungus microsporon audouini, which are arranged on its surface in a mosaic-like fashion.

How would you diagnose Microsporon Tinea?

From seborrhœa by its being in well-defined, discrete patches, being only slightly red and scaly, and by the presence of broken hairs. In any case of doubt the microscope is decisive. From

alopecia areata by its scaliness, the broken hairs, and finding the fungus. The scalp in alopecia areata is smooth and atrophic-looking, and at the margins there are often to be seen the characteristic " exclamation-mark " hairs, which will be mentioned under alopecia. If light from a source rich in ultra-violet rays, such as that from a mercury-vapour lamp, is passed through a sheet of Wood's nickel-oxide glass, most of the visible light is filtered out, and the resulting beam consists mainly of long wave-length ultraviolet radiations. When such a beam is allowed to fall on hairs infected with microsporon audouini, they exhibit a bright green fluorescence, which enables even a single infected hair to be picked out. From " black-dot " tinea by the absence of scales in the latter, and the presence of the characteristic hair-stumps plugging the follicles. Microscopic examination will reveal the type of fungus responsible.

What is the Treatment for Microsporon Tinea ?

The scalp must be epilated, either by X-rays or by thallium. For the former, the scalp is shaved, and marked out into five areas, each of which is given a " pastille " dose of X-rays. In from two to four weeks the hair commences to fall, and epilation is usually complete in a month. The fungus is not killed, and mild antiseptic ointments should be employed until regrowth takes place. The persistence of infected hairs can be detected by the " Wood Light," and they can be removed with forceps. A 2 per cent. white precipitate ointment is usually sufficient, and it should not be used for a fortnight after the X-raying, as the scalp may be sensitive. The presence of seborrhœa or sepsis of the scalp is a contra-indication to the use of X-rays, as is extreme youth, or any disease, such as chorea, or the late sequelæ of encephalitis, which prevents the child from remaining still. In such cases thallium is a good alternative. The child is weighed naked, and a single dose of 8·5 grammes of pure thallium acetate for each kilogramme of weight is given in sweetened water, on an empty stomach. Serious organic disease, particularly nephritis, is a contra-indication. The hair commences to fall in about a fortnight, and though the epilation is rarely as complete as with X-rays, and regrowth quicker, these disadvantages are

offset by the fact that stronger antiseptic ointments can be used from the start, and the percentage of cures is very high. Many children complain of pains in their limbs, and severe toxic effects are occasionally seen, while fatalities have resulted from neglect of proper precautions. Fortunately, toxic symptoms are least likely in those very young children for whom X-rays are unsuitable.

What is Black-dot Ringworm ?

This is also a contagious disease of the scalp in children, and differs from microsporon ringworm in that the patches are neither red nor scaly. The hairs break off short, leaving their stumps as dark plugs in the follicles. These stumps under the microscope are seen to be packed with the fungus trichophyton megalosporon endothrix, which is within the hair.

How would you diagnose Black-dot Ringworm ?

From microsporon infection by the points just mentioned. From alopecia areata by the absence of " exclamation-mark " hairs, the numerous black plugs in the follicles, and by finding the fungus.

What is the Treatment for Black-dot Ringworm ?

The same as for microsporon ringworm.

What is Kerion Celsi ?

Deep ringworm of the scalp. The infecting fungus is generally an ectothrix trichophyton, of which many species are known. Kerion may be produced by intensive treatment of microsporon ringworm, and rarely occurs spontaneously in this disease. It takes the form of sharply-defined, red, raised patches, on the surface of which numerous suppurating points are seen. The patch is boggy and semi-fluctuant, but no pus is found on incision. The hairs are loose, and are easily pulled with their root-sheaths, in which the fungus may be found, but very often it has been largely destroyed by the violence of the reaction, and cannot be recognised microscopically, though it may be recovered by cultivation. Kerion is almost certainly an expression of hypersensitiveness to the fungus. The con-

dition tends to spontaneous cure, but may leave atrophied and pitted areas of permanent alopecia.

How would you treat Kerion ?

Avoid incision, X-rays, and irritating applications. Starch-poultices, changed four times a day, with free use of 1 in 1000 corrosive sublimate at each change, will do all that is required. Epilation with forceps may hasten the cure, but is scarcely necessary. Ionisation with copper ions has seemed to give quicker results in some cases.

Describe Ringworm of the Beard.

This is generally due to trichophyton megalosporon ectothrix, and is very often of animal origin. The degree of reaction depends to a great extent on the particular fungus responsible.

We may distinguish a superficial type, in which the lesions are sharply-defined, red, scaly patches, and a deep type, which is the more common, in which the lesions correspond more or less closely to kerion of the scalp. Often large areas of the beard-region are involved, but in most cases it can be seen that there have been multiple primary lesions. The hairs in the most acutely inflamed areas come away easily with their root-sheaths, and the fungus may be hard to find in them, but hairs from the periphery of a patch will be found to come away without the sheaths, and will be seen to be sheathed with fungus.

Discuss the Diagnosis of Tinea Barbæ.

It may be distinguished from coccogenic sycosis by its more acute onset, its generally more restricted localisation, with well-defined margins, its greater infiltration, the absence of any sense of resistance on pulling the hairs, the absence of the swollen root-sheath in hairs taken from the periphery of a patch, and by the presence of the fungus. The upper lip is commonly affected in sycosis, seldom in tinea.

How would you treat Tinea Barbæ ?

To begin with, the starch-poultice and perchloride lotion treatment should be employed, until the acute inflammation has been subdued, and then the beard should be epilated with

X-rays. Thereafter a 1 per cent. ammoniated mercury ointment should be gently rubbed in twice daily. All clothing which has been in contact with the infected area, such as scarves and collars, should be disinfected.

Describe Ringworm of the Smooth Skin, or Tinea Circinata.

This occurs at any period of life, and takes the form usually of round or oval, red, scaly patches, with a raised, sometimes vesicular margin, and often clearing partially in the centre, while spreading peripherally. Coalescence of rings leads to the formation of gyrate figures, and occasionally recrudescence in the centre of a patch will give an appearance of concentric rings. There is often slight pigmentation left on healing. In some cases there may be large vesicles at the margins, and not very infrequently there is follicular pustulation, occasionally to the extent of recalling kerion. The fungus may be microsporon or either variety of trichophyton, the severer forms being usually associated with ectothrix infection.

How would you diagnose Tinea Circinata ?

From seborrhœa by the bright red, not yellowish, colour, by its not being localised to the mid-line or flexures, by its raised, often vesicular margin, and by discovery of the fungus microscopically in scales mounted in potash. From pityriasis rosea by the absence of symmetry and of the peculiar localisation, and by the presence of the fungus. Itching, while variable in all three conditions, is as a rule more marked in tinea. From eczema, by the sharp margin, and by finding the fungus. In eczematoid ringworm of the hands and feet, which will receive separate notice, finding the fungus may be the only means of diagnosis.

How would you treat Tinea Circinata ?

The kerion-like forms do well with the starch-poultice and perchloride lotion treatment ; less severe cases with the lotion alone. The comparatively dry and scaly forms may be painted with Tinct. iodi twice daily until desquamation occurs, or may be dressed twice daily with an ointment containing Ac. salicyl. and Ac. benzoici, āā grs. xv, in ℥i of Ung. zinci. All clothing in contact should be disinfected.

What is Tinea Cruris ?

This, the eczema marginatum of Hebra, is a fungus infection of the groin, whence it may spread to the thighs, lower abdomen, and sometimes the axillæ. It takes the form of a pink area, covered with fine scales, with a slightly raised margin, which is sharp, and sometimes vesicular. There is generally intense itching. It is due to epidermophyton inguinale, which can be found in the scales. The disease is very resistant to treatment, and shows a great tendency to relapse after apparent cure. In India it is known as Dhobie's itch, and is believed to be spread by the washerman, but in this country it is not uncommonly a venereal disease. It also occurs in epidemic form in boarding-schools.

How would you treat Tinea Cruris ?

The best application is Whitfield's combination of salicylic and benzoic acids, āā grs. xv ad ℥i. This should be thoroughly rubbed in night and morning, and afterwards the parts dusted with a powder. Cotton drawers should be worn next the skin, and all the underclothing should be thoroughly disinfected. Where there is much eczematisation soothing treatment must first be used, and in old-standing cases lichenification may require the use of X-rays. An ointment of Chrysarobin grs. xxv ad ℥i is effective but unpleasant, and need not be used as a rule. Treatment should be prolonged for a week or two after apparent cure, and relapse should be closely looked for.

What is Eczematoid Ringworm of the Hands and Feet ?

Many cases of recurrent vesicular or bullous dermatitis of the hands and feet have of late years been shown to be due to fungus infection, the commonest organism being the epidermophyton. The eruption may be of the type of cheiropompholyx, and may have been regarded as due to some metabolic disturbance until the fungus was found. Often there is nothing to distinguish the case clinically from those due to other causes, but sometimes there will be found a chronic scaly dermatitis between the fingers or toes, which persists between the acute attacks, and occasionally the nails will be found to be infected. In another type of case the lesion is a more chronic dermatitis

of the palms or soles, with sharp margins, often vesicular or pustular, and a dry scaly centre with a tendency to crack.

How would you treat Eczematoid Ringworm of the Hands and Feet?

In the acute stage continuous baths containing Tinct. iodi, ℥i to ℥xx of warm water, are very valuable, the liniment of ichthyol and calamine (3) being used as a dressing when the parts are not in the bath. Later the ointment of salicylic and benzoic acids is good. Disinfection of socks and boots, formalin being useful for the latter, is vital, and after apparent cure care should be taken to keep the feet as dry as possible. Dusting-powders may suffice for this, or X-rays may be necessary.

Describe Tinea Unguium.

Ringworm of the nails is often, but by no means always, associated with ringworm elsewhere. The nails are thickened, friable, furrowed, and discoloured, and there is a collection of *débris* under the free margin. The fungus is often an endothrix fungus, sometimes ectothrix or achorion, rarely, if ever, microsporon. Discovery of the fungus, or of other fungus lesions elsewhere on the body, will give the diagnosis from eczema and psoriasis of the nails. Culture is even more reliable.

What is the Treatment for Tinea Unguium?

Avulsion of the affected nails under an anæsthetic, followed by dressings with an ointment of nitrate of mercury, 2 per cent., will usually cure, and other methods are so tedious and often disappointing that they are not worth entertaining.

Give an Account of Pityriasis Versicolour.

This is a parasitic disease of the skin due to infection with microsporon furfur. It occurs on the trunk, mostly towards the middle line, in the form of brownish-yellow patches, averaging about the size of a threepenny-piece, which may by confluence form larger irregular areas. The lesions are macular, slightly scaling, and give rise to no subjective symptoms. Scrapings examined under the microscope are seen to be swarming with the fungus. Lack of cleanliness is an important factor in the etiology. The condition is easily diagnosed if thought of, the only disease which resembles it being melanodermia, in

which there is no scaling. The fungus can easily be demonstrated. In treatment, the skin should be well rubbed with a solution of hyposulphite of soda, 1 in 8, and then bathed with 5 per cent. acetic acid. This procedure, which results in the generation of nascent sulphur, should be repeated twice daily until all trace of the disease has disappeared, and the clothing should be thoroughly disinfected.

What is Erythrasma ?

A reddish macular eruption, seen most often on the groin, due to a very small fungus, the microsporon minutissimum. It seldom gives rise to itching, and is curable by the same treatment as P. versicolour.

BACTERIAL DISEASES.

What is Impetigo Contagiosa ?

This is an acute infective disease, characterised by the sudden appearance of pink macules, on which flaccid bullæ quickly rise. These become purulent, and dry into scabs, which have a curious "stuck-on" appearance. The bullæ are so evanescent as often to escape notice, and only the scabs and pink areolæ are seen, but as a rule close search enables a typical lesion to be seen. Sometimes, most often on the trunk, the bullæ are larger, firmer, and more persistent (impetigo bullosa), and sometimes the centre dries up before the periphery, producing rings, and by confluence gyrate figures (impetigo circinata). By coalescence large areas may be involved, but the lesions tend on the whole to be discrete. Removal of the crust shows that the deeper layers of the rete are exposed, presenting a red, moist, oozing surface. The disease often spreads with great rapidity. The sites of election are the face, the scalp, and the fingers, but no part of the body is immune. There is often mild itching. Each individual lesion lasts for about ten days, but as fresh ones tend always to develop, there is no natural period to the disease.

What is the Etiology of Impetigo ?

It has long been held that streptococcus pyogenes was the sole cause, and that infection with staphylococci was secondary,

but several recent workers have claimed that a considerable proportion of cases are staphylococcal from the beginning. The inoculation takes place through a breach in the skin, and so impetigo is a common complication of itching diseases. In children impetigo of the face is often secondary to pediculosis capitis, which should always be looked for, and on the body papular urticaria and scabies need to be kept in mind. Septic discharges may provide the pyococci, or more commonly infection comes from a previous case. It may occur in epidemic form in schools.

How would you diagnose Impetigo ?

From eczema by the skin between the lesions being clear, instead of being covered with close-set vesicles or papules ; by the absence of severe itching ; and by the observation of characteristic early lesions in some part. From infected seborrhœa by the presence of sound skin between the lesions ; by the absence of the typical localisation of seborrhœa ; and by the absence of typical uninfected seborrhœa elsewhere. From pustular syphilis by the absence of infiltration of the base of the lesion, of symmetry, and of the other signs of generalised syphilis. Bullous impetigo may simulate pemphigus, and if the case is not seen early enough to determine whether or not the bullæ arise from normal skin, it may be necessary to await the result of treatment for a day or two to decide. The impetigo will yield to simple local treatment, the pemphigus will not, and in addition the buccal mucosa is often affected in pemphigus, never in impetigo. Circinate impetigo on the scalp may resemble tinea, but study of early lesions should give the diagnosis without resort to the microscope.

How would you treat Impetigo ?

Remove any cause, such as pediculosis. If the attack is very acute, commence by dabbing on calamine lotion, to which Sulph. præcip., grs. ii ad ℥i, has been added. This should be done for two or three days, the crusts not being disturbed, and then the parts should be soaked with warm olive oil, the crusts scraped off when soft, and the parts dressed with cloth spread with 1 per cent. ammoniated mercury ointment. The dressing should be changed twice daily, and warm oil used at each change,

in order to remove the old ointment and any fresh crusts. The very occasional case which resists this treatment may be painted with 1 per cent. nitrate of silver twice daily in addition.

What is Ecthyma ?

It is similar to impetigo, and of identical etiology, but the lesion is deeper, going through the whole thickness of the skin, and even sometimes resulting in deep ulceration. It is seen mainly on the legs and buttocks, and is often secondary to scabies or pediculosis corporis. The crusts are browner and more adherent than those of impetigo.

How would you treat Ecthyma ?

Remove crusts and paint with $AgNO_3$, 1 per cent., then dress with an ointment of red oxide of mercury, 2 per cent. For deep ulcers use wet-dressings, and bathe the parts with 1 in 1000 $HgCl_2$ at each change.

What is Erysipelas ?

This is classed as an infectious fever, and will only be dealt with briefly. It appears suddenly in the form of a bright red blush, and the affected area soon becomes swollen and brawny, and often surmounted by vesicles or bullæ. The margins of the lesion are sharply defined, and advance rapidly. Sometimes the advance is in one direction only, and the opposite side clears, so that the patch moves from one side of the body to the other, as from cheek to cheek. The onset is marked by severe constitutional disturbance, often with one or more rigors, and there is pyrexia. Apart from cases secondary to wounds, the face is the usual site. The condition tends to spontaneous recovery, and the temperature generally comes down by crisis, but septicæmia, sinus thrombosis, and pyæmia are occasionally met with, and may be fatal. Affection of the scalp is followed by temporary alopecia. A curious recurrent form is seen on the face, and may in time lead to elephantiasis of the lip or other part.

Discuss the Diagnosis of Erysipelas.

Acute eczema may be distinguished by its margins not being so sharp, by its severe itching, and by the absence of constitu-

tional disturbance and pyrexia. Herpes zoster by the grouping of the vesicles, and their firm and resistant nature, while the prodromal neuritic pain is also a help in diagnosis.

What is the Etiology of Erysipelas ?

A streptococcus, possibly a specific variety. It may enter by a small abrasion, or through a larger wound. The recurrent cases sometimes have a chronic septic focus, as apical dental abscesses, or empyema of the antrum, but often nothing of the kind can be found. Erysipelas is highly contagious.

What is the Treatment for Erysipelas ?

Internally Tinct. ferri perchlor in full doses, and a supporting diet. Antistreptococcus serum may be injected. Locally wet carbolic dressings, or painting with equal parts of ichthyol and glycerine. In recurrent cases every effort must be made to find the primary focus, and autogenous or even stock vaccines should be given a trial.

What are Boils ?

A boil is a perifolliculitis, due to staphylococcus aureus. The inflammatory reaction is very intense, resulting in sloughing of a portion of corium *en masse*, this being the " core " of the boil. The characters of the boil are too well known to require description. There may be only one boil, or there may be many, coming out in crops over a long period. This is known as furunculosis.

What is the Etiology of Boils ?

As stated, staphylococcus aureus is the infecting agent. In recurrent cases there is generally a definite cause, such as, for example, a pruritic disease, as scabies, prurigo, or pediculosis, in generalised cases, or the rubbing of a dirty collar, rowing, riding, etc., in localised cases. A special form in the axillæ seems to be due to infection of the sweat-glands. Boils are common in glycosuria, and may also complicate nephritis.

How would you diagnose Furunculosis ?

The recognition of the boils themselves presents no difficulty, as the hard, red, painful swellings, which soon point and dis-

charge first pus, and then the greenish-white core, are perfectly characteristic, and the only point in diagnosis is to determine the presence or absence of any underlying condition, and for this it is essential that every patient suffering from furunculosis should be thoroughly and systematically examined.

How would you treat Boils ?

The individual boil :—If seen early, an attempt may be made to abort it by applying a mercurial plaster, or by injecting into it ℥ .v of 1 in 20 carbolic. Do not incise until it points, and allow the core to separate naturally. Avoid poultices, and apply hot boric fomentations, changed frequently, and bathe with 1 in 1000 $HgCl_2$ at each change. Hot carbolic dressings, 1 in 40 or 60, may be used for their local anæsthetic effect, but the perchloride should not be omitted. Recurrent furunculosis :—First look for a cause, local or general, not neglecting glycosuria or albuminuria, and if found, treat it. Next employ efficient local antisepsis. Frequent bathing of the whole of the region affected, using 1 in 1000 $HgCl_2$ or 1 in 4000 acriflavine, will generally result in a cure in a few weeks. Great attention should be paid to personal cleanliness, and the underclothing should be changed very frequently. In strictly localised cases, as on the back of the neck, or in the axilla, an epilation dose of X-rays, by causing a temporary atrophy of the glands, will cure. General treatment is of minor importance. Vaccines sometimes help, but if their use is confined to cases which resist the above local treatment, few dramatic results will be seen. Stock vaccines seem to act as well as autogenous. Recently staphylococcus toxoid has been found enormously more potent as an antigen than vaccines, and it will probably supersede them, but it must be emphasised that the antibody-content of the blood is of quite minor importance in furunculosis.

What is Sycosis Barbæ ?

This is a papulo-pustular eruption which appears on the lips, chin, or cheeks, almost exclusively in adult males. It may appear suddenly over a large area, or more commonly spread slowly from a small beginning. It may be primary, or be a sequela of infected eczema or impetigo. The papules and pustules are follicular, and many are pierced by the hairs. The

skin between is red and infiltrated. In some chronic cases there are few pustules, and a diffuse, scaly, red, infiltrated patch may be seen. The hairs are loose, but not so loose as in tinea, and on pulling them many are seen to have brought with them a swollen, gelatinous-looking root-sheath. As a rule there is no permanent hair-loss or scarring, but occasionally both are seen (lupoid sycosis). There is usually some itching.

What is the Etiology of Sycosis ?

The actual invading organism is staphylococcus aureus, but in many cases, perhaps all, there is an antecedent seborrhœa, which prepares the soil for the coccus. In many cases, too, there is a reservoir of infection in the nose, or even more often in the form of a chronic blepharitis. As mentioned, sycosis may be a sequela of infected eczema or impetigo, and a septic cut from shaving may also start it.

How would you diagnose Sycosis ?

From eczema, by its being confined to the hairy parts of the face, and by the papules being all follicular. Vesicles are found in eczema, not in sycosis. Remember that you have not excluded sycosis when you have diagnosed eczema, as the two may co-exist. From acne vulgaris by the absence of comedones and by the involvement of the hairy parts only. From rosacea also by the distribution. From ringworm by the points mentioned under that disease. From framboesiform syphilide by the confinement to the hairy parts, the absence of marked infiltration, the follicular nature of the pustules, and the absence of other signs of syphilis. Where there is scarring, lupus vulgaris, lupus erythematosus, and lupoid syphilide have all to be excluded. In lupus vulgaris there are typical "apple-jelly" nodules to be found, in L. erythematosus the scaling, the sharp margin, and the very superficial, milky scarring are characteristic, while in tertiary syphilis there will probably be at least a small amount of ulceration somewhere, and there will be other evidence of syphilis, and in all three conditions the distribution will almost certainly differ from that of sycosis.

What is the Prognosis of Sycosis ?

All cases are curable in the early stages, if the patient will carry out the treatment thoroughly, but many cases in hospital

practice are not cured. In chronic cases cure is less certain, but not impossible.

What is the Treatment for Sycosis ?

Treat any cause, such as nasal discharge or blepharitis. A 1 per cent. ammoniated mercury ointment is suitable for the latter. Avoid shaving, except in dry, chronic cases, and instruct the patient to cut the beard as close as possible with scissors. Epilation should be carried out with forceps if the disease is not too extensive, otherwise with X-rays. This may have to be done more than once. In acute cases it is useful to commence with hot boric fomentations, bathing the parts with 1 in 1000 $HgCl_2$ at each change. Later, the same lotion may be used, in conjunction with epilation. Ointments are generally to be avoided, but in chronic scaly cases 10 per cent. oleate of mercury ointment may be rubbed in. In all cases the patient should be instructed to avoid spread, by the exercise of the greatest care and cleanliness, and to persevere with treatment. In very resistant cases it may be justifiable to produce permanent hair-loss and atrophy of the skin by means of the X-rays. Ultraviolet light from the mercury-vapour lamp is sometimes of service. Vaccines are valueless.

What is Impetigo of Bockhart ?

This is a very superficial folliculitis, which may occur anywhere, but is perhaps commonest on the thighs, and is generally secondary to some septic focus. It may be produced by poulticing or fomenting a septic wound without using $HgCl_2$ or other efficient antiseptic. It is easily cured by dryness and antisepsis.

What is Acne Vulgaris ?

A chronic disease of the sebaceous glands, characterised by occlusion of the orifices through hyperkeratosis, leading to retention of the secretion, with secondary suppuration, which may spread beyond the walls of the follicles. The disease begins as a rule about puberty, when the glands take on enhanced activity. It affects chiefly the face, though not seldom the chest, shoulders, neck, and back are involved, and rarely the upper arms and thighs. The primary lesion is the comedo,

which appears as a small follicular papule, capped with grey or black. On pressure there emerges an oat-shaped body with a black tip. This consists of the sebaceous secretion, together with the superficial horny layers of the follicle. The skin between the comedones is thick and greasy. Sometimes only simple comedones are seen, but generally infection with staphylococci ensues, and minute perifollicular abscesses are formed. The appearance is then that of a follicular pustule, capped with the black head of the comedo. Sometimes large abscesses form in the subcutaneous tissues, extending beyond the original comedo, and outlasting it, so that only a nodular swelling is seen, hard to the touch, and of normal colour, or only slightly reddened. Such " indurations " appear solid, but on incision yield often surprising quantities of thick, viscid pus. The uncomplicated comedo lasts many weeks, the pustules from four to ten days, the indurations weeks or months. The latter on healing leave depressed scars.

What is the Etiology of Acne Vulgaris ?

Uncertain. The enhanced activity of the glands at puberty undoubtedly plays a part, and the suppuration is due to staphylococci. The comedo contains enormous numbers of a bacillus, which has been called B. acnes, but real proof of its being the cause of the disease is wanting. Gastric disturbance, constipation, anæmia, and hyperglycæmia may all be found associated with acne, but here again there is no evidence of a casual relationship.

Discuss the Diagnosis of Acne Vulgaris.

The comedo is pathognomonic. Acne vulgaris affects mainly the peripheral parts of the face, rosacea the central. Vulgaris affects mainly adolescents and young adults, rosacea mainly older subjects. Acne varioliformis affects mainly the forehead and temples, and the papules undergo a central necrosis which is quite diagnostic.

How would you treat Acne Vulgaris ?

Any gastric derangement or dietetic indiscretion should be corrected. Laxatives or iron should be given if indicated.

Routine use of a sulphur soap, with removal of comedones systematically with the comedo-extractor, and the application frequently of a lotion containing sodium hyposulphite, 1 in 8, will often bring about great improvement, but the treatment of choice is the X-ray, given weekly, for from six to twelve weeks, in a dose of $\frac{1}{4}$ pastille. Ultraviolet light from the mercury-vapour lamp, or the tungsten-arc, may do good, but is inferior to X-ray. If the ray is not available, and milder measures have failed, exfoliation may be induced, by frequent painting with tincture of iodine, or with 10 per cent. $HgCl_2$ in spirit. This will remove many of the comedones at one time.

What is Rosacea ?

This, formerly known as acne rosacea, is a chronic disease of the skin of the face, characterised by persistent hyperæmia, with the formation of papules and pustules, and sometimes resulting in hypertrophy of the sebaceous glands, and of the connective tissue supporting them. The first change noticed is that the skin of the nose, chin, forehead, and central portions of the cheeks is redder than normal. Exacerbations are frequent, particularly after meals, and each time the return to normal is less complete. Then dilated vessels appear, and papules form, a few of which become pustular. The chronic hyperæmia leads to overaction of the sebaceous glands, so that the skin becomes greasy, and the glands prominent. Sometimes after many years the gland and connective-tissue hypertrophy becomes extreme, and the condition known as rhinophyma develops, in which the nose is swollen and bulbous, red, and traversed by numerous dilated veins. Rosacea is usually accompanied by a little mild itching and burning.

What is the Etiology of Rosacea ?

It appears to be an exaggeration of the blushing or flushing which is normal in certain circumstances, such as after taking a hot drink. Barber has found hypochlorhydria, or even achlorhydria, in a considerable proportion of cases. Most cases suffer from chronic constipation, and many take carbohydrates to excess. The fact that cases are seen in much younger subjects now than formerly suggests a dietetic origin. In some women pelvic disorders seem to play a part, but the attendant constipa-

tion may be the factor of importance. It affects mainly the middle decades of life, but cases in the teens are seen nowadays. Tea, alcohol, and spices aggravate it, and may possibly cause it. Seborrhœa elsewhere is common, and the relationship of seborrhœa to rosacea is still unsettled.

How would you diagnose Rosacea ?

From vulgaris by the points mentioned under that disease. From lupus erythematosus by the scarring and the characteristic scales in the latter, in which also there are no pustules, and the chin is rarely affected. Iodide eruption may very closely simulate rosacea, and the history, and finding iodine in the urine, may be the only certain clues. One form of papular secondary syphilide shows some resemblance, but the lesions have more infiltration, will almost certainly not be confined to the face, and there will be other signs of syphilis.

What is the Prognosis of Rosacea ?

Early cases may be cured, but often such a radical change in the patient's habits is required that many are not. Later cases can be greatly improved, and sometimes cured. Rhinophyma may be enormously improved by surgical means.

What is the Treatment for Rosacea ?

Avoid alcohol, and excess of tea, coffee, cocoa, sugar, and starches. No food or drink is to be taken very hot. The glare of the fire is to be avoided, and some cases are made worse by exposure to the sun or to strong winds. Combat constipation and achlorhydria. If a gastric analysis is impracticable, give Ac. Hydrochlor. dil., ℥xv t.i.d., with Ext. casc. sagr. liq. ℥v, and note the effect. If the acid seems to be doing good, increase the dose to ℥xl t.i.d., or even ʒi. The laxative also can be increased or decreased according to the effect. In some cases Ichthyol, ℥ii, Kerol, ℥ii-v in a capsule, or Dimol, grs. ii-v, may be given with benefit. Any pelvic disorder should be corrected. Often fresh air and exercise are indicated. Associated seborrhœa, on the scalp or elsewhere, should be treated. Locally, calamine lotion, containing sulph. præcip., grs. ii to x in the ʒi, will be found useful. To reduce the hyperæmia of the nose,

collodion (not flexile) may be painted on. By its contraction it constricts the vessels. Prominent veins may be obliterated by electrolysis, or the whole area may be rendered paler by means of CO_2 snow. Early rhinophyma may be cured by electrolysis of every enlarged follicle, and later cases may be pared down by the knife, when rapid healing and greatly improved appearance follow. X-rays in very small doses are often of service.

TUBERCULOSIS OF THE SKIN.

Give an Account of Lupus Vulgaris.

This is a chronic granulomatous disease, characterised by the appearance in the skin of typical yellowish (" apple-jelly ") nodules, which show a greater or less tendency to break down and ulcerate. The disease may arise primarily in the skin, either by direct inoculation or through the blood-stream, or else, and this is more common, it commences in a mucous membrane, and reaches the skin through the lymphatics. Four-fifths of all cases affect the face, and fully half the nose. Three-quarters of the latter show involvement of the nasal mucosa—a most important point in prognosis and treatment. The disease is essentially a lymphatic one, spreading along the plexus on the deep fascia, and showing a secondary efflorescence on the surface. It is thus always more extensive than it looks. It spreads slowly, taking months or years to cover a large area. The characteristic appearance is one or more bright red, raised, scaly patches, with more or less ulceration, destruction of tissue, and scarring. If the blood be pressed out of the patch by means of a glass spatula, the typical " apple-jelly " nodules become apparent. The scars are seldom sound, as nodules can almost always be found in them. Ulceration and tissue-destruction depend mainly upon secondary pyogenic infection. There may be considerable crusting, which may have to be removed before a diagnosis can be made. In some cases, principally on the hands and feet, there is hyperkeratosis—lupus verrucosus. In old-standing cases, squamous epithelioma may develop, and this is particularly likely to happen if X-rays have been used in treatment.

What is the Etiology of Lupus Vulgaris ?

The organism is generally the human tubercle bacillus, sometimes the bovine. The patients are generally children or young adults, but no age is exempt, and there is a distinct group of elderly cases. There is often a history of exposure to infection in the home, and not uncommonly there is co-existing gland-tuberculosis, but severe visceral tuberculosis is not very common. The exanthemata, particularly measles, predispose to the disease, and a multiple disseminated type may result.

How would you diagnose Lupus Vulgaris ?

From lupoid syphilis by the comparatively long time taken to reach the size, by the presence of the typical nodules, those of the syphilide being larger and not so yellow, by the presence of nodules in the scar, that of syphilis being usually free from them, and by the presence of signs of tuberculosis elsewhere. The Wassermann reaction should be done as a routine before commencing to treat lupus, as double infection is not uncommon, diagnostic errors apart. From lupus erythematosus, by the typical scaling of the latter, and the absence in it of nodules. The scars of L. erythematosus are very fine, and free from nodules. There is a type of L. vulgaris which rather closely resembles L. erythematosus, and has been called L. vulgaris erythematoides. From lupoid sycosis by the points mentioned under that disease.

What is the Prognosis of Lupus ?

Good as regards life, though occasionally laryngeal involvement may be fatal, and there is always a possibility of carcinoma developing after many years. The presence of visceral disease must, of course, worsen the outlook. The prognosis is bad as regards appearance, as scarring is inevitable. There is a fair prospect as regards the disappearance of active lesions.

What is the Treatment for Lupus Vulgaris ?

General :—A rich diet, including large amounts of butter and cream, with the addition of cod-liver oil, and plenty of fresh air, are of great value. The Gerson Diet is helpful in some cases. NaCl may be replaced by other chlorides with advantage. Exposure to the sun's rays, especially at a high

altitude, is often marvellously effective, and of recent years an effect comparable, if not equal to that of the Alpine sun, has been obtained by exposing the patients to the unscreened light of a powerful carbon-arc lamp. The exposure should be short at first, and should be increased until the patient is exposed for, say, three hours, daily, or at least three times a week. Tuberculin has its advocates. It must be used with very great caution, as it is not unknown for it to cause unsuspected visceral tuberculosis to flare up. Local treatment: —Scraping with a sharp spoon, followed by painting the raw surface with Liq. hydrarg. nitr. ac., is a most valuable procedure, especially in florid, secondarily infected cases. By it the case is converted to the flat, scaly type, with comparatively few nodules, or even complete healing takes place, though this is likely only to be temporary, as sooner or later fresh nodules will probably appear in the scar. Where the nodules are few, they may be bored out with a sharpened match-stick, dipped in the acid nitrate solution, or the whole surface may be painted with it. Diathermy has been advocated as superior to scraping, but the results are not convincing. Excision may occasionally be practised with success, but only in limited cases, where a wide margin of healthy tissue can be taken, and more of the deep fascia than of the skin must be removed. Salicylic acid, in plaster or paste (15), may be applied for long periods, and may in time reduce the nodules until they can be dealt with separately by the match-stick. For small patches on the face nothing surpasses the Finsen lamp, as the scar is so smooth and sightly, but the method is too tedious for extensive cases. The X-ray or radium may be used in a single massive dose where there is a prospect of destroying the whole lesion at one sitting, but repeated exposures are to be condemned, as the risk of carcinoma is so great. The rays may be used, too, to reduce hyperkeratosis in the warty type, and a single pastille dose given to the granulating area left by scraping will expedite healing, and promote a flatter and smoother scar. Freezing with CO_2 snow will often give a very fine scar, but must be deep, and is very painful. Ionisation with zinc has cured some cases.

What is Tuberculosis Verrucosa Cutis?

This, also known as verruca necrogenica, appears on the hands, chiefly in butchers and post-mortem attendants, in the

form of warty lesions surrounded by a red halo. The infection tends to spread up the lymphatics, which may show thickening, and secondary lesions may develop higher up the limb. The treatment consists in removing the thickened horny layer with the sharp spoon, and then either freezing with CO_2 snow, or giving a full dose of X-rays.

What is Scrofulodermia ?

A massive tuberculosis of the skin, as opposed to the lymphatic permeation of lupus vulgaris. It is secondary to some underlying focus, in glands, bone, or joint. It appears first as deep gummatous nodes, which early soften in the centre, and break down to form deep, indolent ulcers. There are no " apple-jelly " nodules, unless, as sometimes happens, there is a concomitant lupus. The treatment is that of the underlying lesion, and is mainly surgical. A pastille dose of X-rays following operation often expedites healing, and promotes a better scar, and ultraviolet light, both locally and to the whole body, is useful.

What is Lichen Scrofulosorum ?

This is a chronic disease seen most often in children or young adults, who are as a rule the subjects of tuberculosis elsewhere. The eruption consists of minute, grouped follicular papules, generally confined to the trunk. The papules are of a yellowish-brown colour, often little different from that of the normal skin. Many of them are capped with a scale. The rash lasts for some months, and disappears spontaneously. There are no subjective symptoms. The prognosis is good, apart from tuberculosis elsewhere. The only local treatment indicated is inunction of a 2 per cent. salicylic acid ointment.

What is Papulo-necrotic Tuberculide ?

Under this title are grouped several conditions which formerly received separate names, such as acne necrotica or varioliformis, acnitis, and folliclis. The primary lesion is a fairly large, shotty papule, which undergoes central necrosis, and heals under a brownish scab, leaving a fine, depressed scar. It is believed to be due to the tubercle bacillus in an attenuated form circulating in the blood-stream. The lesions come out in crops, and the

disease may go on indefinitely in this manner. There is quite often no evidence of any form of tuberculosis. The diagnosis is easy, the necrotic papules and the scars being unmistakable. The treatment includes all general measures against tuberculosis, and locally a 2 per cent. sulphur ointment may act well.

What is Erythema Induratum ?

This, also known as Bazin's Disease, is a chronic affection of the legs, mostly in young female subjects. It appears in the form of deep-seated nodes, most often at the lower parts of the calves. These are painless, enlarge slowly, involve the skin, break down and ulcerate, and after months heal, leaving thin papery scars, with pigmented borders. The ulcers are very indolent, and their floors are covered with dusky, irregular granulations, which bleed readily.

What is the Etiology of Erythema Induratum ?

It is a gummatous tuberculide, the bacilli having been demonstrated in the nodes. The original lesion is a peri- and endo-phlebitis, and prolonged standing plays a big part in its production.

How would you diagnose Erythema Induratum ?

From gummatous syphilide by the youth of the patient, the location of the lesions, their symmetry, their great chronicity, and by the absence of other signs of syphilis, including the Wassermann reaction.

What is the Treatment for Erythema Induratum ?

General treatment for tuberculosis should be given, and rest in bed is usually curative. Where ulceration has occurred, wet-dressings of 2 per cent. aluminium acetate are useful, or a 2 per cent. red oxide of mercury ointment. A useful adjuvant is to bandage the legs with elastoplast, which is changed weekly.

What is Lupus Erythematosus ?

A chronic, erythematous scarring disease, of which there are two main types, the discoid or localised, and the disseminated.

The discoid type affects the face principally, and to a less extent the scalp and hands. It is occasionally seen on the mucosa of the lips. It appears as red, sharply-defined patches, covered with greyish scales, which are closely adherent. On removal of a scale it will be seen that there are on its under surface small spicules, which fit into depressions in the underlying skin. The lesions tend to clear in the centre, and leave fine, atrophic, milky scars. There is not often much tissue-destruction. The typical situation is on the bridge of the nose, and the central portions of the cheeks, whence the names of " butterfly " and " bat's-wing " lupus. The lobes and margins of the ears are also often affected. There is generally some itching. The disseminated form comes out acutely on the face and upper parts of the trunk, and the arms and hands, and in very severe cases it may be almost universal. There are pyrexia and severe general symptoms, and a fatal issue is common. It may arise out of the discoid form, or apart from it.

What is the Etiology of Lupus Erythematosus ?

Unknown. There is some evidence that it may be a tuberculide, but there is as good evidence that the toxins of other organisms may produce it, and the disease is so well defined that it is doubtful if it can be ascribed to more than one cause. The character of the capillary circulation, and exposure to sun, wind, and cold, all play a part in determining the localisation of the eruption.

Discuss the Diagnosis of Lupus Erythematosus.

The milky scarring, the spicules on the under surfaces of the scales, the distribution on the nose and cheeks, and the sharp margins all make up a very distinctive picture. On the hands the condition may be almost or quite indistinguishable from ulcerated chilblains, if there are no typical lesions elsewhere, and lip lesions, if solitary, cannot be diagnosed from lichen planus. The diagnosis from L. vulgaris is discussed under that heading, and the same applies to rosacea and eczema. No form of syphilis is likely to give trouble, as the infiltration, the absence of the typical scales, and the probable presence of ulceration will prevent mistake, and the Wassermann reaction will be an additional safeguard. Psoriasis on the face may resemble

L. erythematosus, but it never scars, and the scales are different, and there are almost certain to be typical lesions elsewhere. On the scalp the scars of L. erythematosus are like those left by favus and folliculitis decalvans, and in the absence of active lesions it may be impossible to make a diagnosis. Alopecia areata cannot be confused, as in it there is no scarring.

What is the Prognosis of Lupus Erythematosus ?

Many of the disseminated cases die. The discoid form is not dangerous to life, but is rebellious to treatment, and tends to recur even after apparent cure. It may clear up spontaneously after many years.

How would you treat Lupus Erythematosus ?

The acute disseminated cases must be kept in bed. Quinine or salicin internally may be given, and injections of anti-streptococcus serum may be tried. In the discoid form quinine and salicin are also of value, but the most efficacious treatment is the intravenous injection of one of the gold compounds, such as gold-sodium thiosulphate, or lopion (Bayer). The initial dose should be small, 0·01 to 0·025, and it is seldom necessary or desirable to go above 0·1. The dose should be given once or twice a week, the patient being carefully watched for any signs of intolerance, such as albuminuria or an erythema. Severe and even fatal reactions may occur. Relapse is not uncommon, but may yield to further injections, and probably about two-thirds of all cases can be cleared. Intramuscular injections of bismuth are sometimes successful and are less upsetting than gold. Locally, calamine lotion soothes ; ointments generally irritate. Resistant patches may be caused to disappear by freezing with solid CO_2, either by means of a pencil applied for from 20 to 40 seconds, or as a mush with acetone. X-rays should not be used.

SYPHILIS.

What is Syphilis ?

A general infective disease, affecting all parts of the body, but only the cutaneous manifestations will be considered here.

Give a Clinical Account of Syphilis of the Skin.

The first manifestation, the primary sore, appears from twenty to thirty days after exposure to infection. Longer and shorter incubation periods may occur, but are less common. The sore, or chancre, appears most often on the genitalia, but a fair number, 10 per cent. in some series, less in most, occur on the lips, tonsils, fingers, or elsewhere. At first macular, it is usually papular when first noticed, or may even have commenced to ulcerate. It is of firm consistence, and when fully developed may be of almost board-like hardness, raised, sharply defined, oval or circular, and sometimes ulcerated. Ulceration depends mainly on secondary pyogenic infection, and the induration depends at least to some extent on the use of caustics in treatment. Within a week of the appearance of the chancre, the regional glands commence to enlarge. They are firm, discrete, and painless.

Give an Account of Secondary Syphilis.

This is the stage of generalisation of the disease. It appears on the skin about the time that the chancre commences to involute, and lasts untreated for from six months to two or even three years. The rash takes many forms, which will be described, but all forms have certain features in common. They are symmetrically distributed, are roughly evenly spaced, and of even size, have a typical reddish colour, which has been likened to raw, lean ham, and, with the exception of the macular form, are all infiltrated, so that the examining finger appreciates that there is something under the skin, as well as in it. The mucous membrane of the mouth and throat is generally involved at one time or another, the glands are enlarged, discrete, elastic, and painless, those in the posterior triangle of the neck, and the epitrochlears being perhaps the best for determining this, and in addition there is usually some general disturbance, often headache, and nocturnal pains in the long-bones. Often the hair falls irregularly, the resulting alopecia being streaky, and being likened to "glades in a forest." The Wassermann reaction is positive in almost all cases during the secondary stage. As the rash involutes, brownish pigmentation may be left behind, especially on the legs, and occasionally there may be slight scarring, of a thin papery kind.

Describe the Principal Secondary Syphilides.

The macular, which is the earliest to make its appearance, generally first on the forehead and the upper part of the chest. It is of a pale pink colour at first, and may be invisible in artificial light. The macules are of even size, up to that of a threepenny-piece, and are closely and evenly set. A late macular rash, which is often annular, is occasionally seen at the close of the secondary period, after other manifestations have cleared up. The papular, which may take various forms, such as the miliary or lichenoid syphilide, in which the papules are minute; the corymbose, in which small papules are grouped round a larger one; the lenticular, in which the papules are of fairly even size, up to about 10 mm. in diameter; the giant papular, in which the papules are of much greater size; and the annular, in which the papules, usually rather small, are arranged in rings. In moist situations, as at the anus, on the genitalia, and in the flexures in stout subjects, the papules become large, flattened, and whitish in colour, from maceration of the epidermis. They are then known as condylomata.

The pustular, in which the lesions are suppurative from the start. The whole of the rash is not often pustular, and the forehead is the region most likely to show this syphilide.

The frambœsiform, in which the lesions are large, markedly raised, papillomatous-looking, and bathed in pus, resembling the lesions of yaws. This form is usually rather late in appearing, and is commonest on the beard-region and the scalp.

The pigmentary, which takes the form of a recticular brownish mottling on the sides of the neck. It is a late manifestation, and is practically confined to women.

It must be emphasised that more than one of these types of rash may co-exist, and that, in fact, polymorphism of the rash is a feature of secondary syphilis.

What is Tertiary Syphilis?

The division into primary, tertiary, and secondary is arbitrary, but while the two latter may co-exist, and lesions may be found which are difficult to place, it may be said, broadly, that tertiary lesions do not appear until the secondary stage is past, usually not within at least two years from the date of infection.

They are of two main types, the nodular and the gummatous. The nodular tertiary syphilide makes its appearance as an infiltration in the corium, which bears some resemblance to the nodule of lupus vulgaris, but is in general larger, less distinctly yellow when examined with the pressure-glass, and more prone to confluence. The developed lesion is a red, irregularly-shaped patch, sometimes sharply defined, but often with outlying nodules. It is not uncommonly annular, and it is characteristic of it to heal in one part, while extending in another. The scar is thin and papery, but sound and free from nodules. The amount of ulceration is very variable, being on the whole more than that associated with lupus vulgaris. The spread of the lesion is fairly rapid as a rule, but occasional cases of great chronicity are seen. There is as a rule comparatively little tissue-destruction, and when healing has been induced by treatment, the resulting scar is often slight. The gummatous tertiary appears as a node in the hypoderm, and enlarges so as to involve the skin. It breaks down and ulcerates, and may result in very great destruction of tissue, involving cartilage and bone. It is often solitary, but may be multiple. The ulcer produced is typical, having steep, punched-out sides, and a greyish, unhealthy-looking base. Trauma often determines the site of the lesion. On healing it leaves a thin, depressed scar, which is often pigmented. In addition to these two types of lesion syphilis may modify lesions due primarily to some other cause, as, for example, varicose ulcers, which may remain definitely of their own type, but which refuse to heal until specific treatment is instituted. In some gummatous lesions, especially on the hips, thighs, and legs, there are abundant heaped-up crusts, which may at first sight suggest psoriasis, but which conceal typical ulcers. This form is known as rupia. In late tertiary syphilis the tongue may show an irregular thickening of its epithelium, which is whitish, from maceration. There is also infiltration in the submucous layer, and sometimes ulceration. This condition is known as leukoplakia, and is an important precursor of cancer.

What is the Etiology of Syphilis ?

It is caused by the organism called by its discoverer, Schaudinn, spirochæta pallida, and now generally called

treponema pallidum. Infection is in most cases venereal, but innocent infection through kissing, using the same cup as an infective person, or handling an infected patient in the cases of doctors and nurses, is not very uncommon. Intra-uterine infection, causing congenital syphilis, will be dealt with later.

Discuss the Diagnosis of Cutaneous Syphilis.

The primary sore :—Any lesion on the genitalia is to be regarded with suspicion. The little ulcers left by herpes progenitalis are shallow, and their neighbourhood not infiltrated, but remember that they may offer a portal for infection, and also that the chancre is not always indurated. Pyogenic lesions on the penis are common in scabies, but there will be typical lesions elsewhere, and the characteristic appearances of the chancre will be wanting. In all cases of sores on the penis in which the diagnosis is not absolutely certain a search should be made for the spirochæte with the dark-ground microscope. Extra-genital chancres may be diagnosed as chronic pyogenic lesions, or as tuberculous, but if the possibility of syphilis be borne in mind a dark-ground examination will decide ; while after the first week or so the enlargement of the regional glands should arouse suspicion. The Wassermann reaction does not become positive for several weeks, and a diagnosis should always be made before this.

The secondary rash :—A history of exposure to infection would be helpful, but a reliable history is the exception. The presence of a primary sore, or of the scar left by one, or a history of such a sore, would be strong evidence. The existence of malaise, headache, and pains in the long-bones, with general adenopathy, would also be suggestive. Mucous-membrane lesions, especially in the mouth and pharynx, often with superficial ulceration of the throat, are common, and their absence would lead one to require strong other evidence before diagnosing syphilis. The presence of condylomata is practically conclusive. In the rash itself the principal points are its symmetry, its " raw ham " colour, the sense of infiltration felt by the (gloved) finger, and the comparatively even size and distribution of the lesions. The detailed diagnosis from pityriasis rosea, psoriasis, and rosacea has been discussed under those heads.

Tertiary syphilides :—The diagnosis from lupus vulgaris and erythematosus and sycosis has been given under those diseases. Remember that syphilis may underly a chronic condition which was not originally specific, and make full use of the Wassermann, which will be found positive in practically all secondary cases, and in the great majority of active tertiary syphilis of the skin.

What is the Prognosis of Syphilis ?

In the primary stage the prospect of complete cure diminishes with delay. Thorough and prolonged treatment is in all stages necessary if the patient is to have any chance of cure. In the secondary stage the prospect of complete cure is less, but a considerable proportion can be rendered permanently free. In the tertiary stage complete eradication of the disease is probably impossible, but practically all cases can be rendered symptom-free. The danger of syphilitic parents begetting congenital syphilitic children can be averted by treatment.

How would you treat Early Syphilis ?

Subject to the absence of any other serious organic disease, treatment should be intensive. An initial dose of 0·45 g. of neosalvarsan intravenously, and 0·2 g. bismuth intramuscularly, should be followed by further injections of 0·6 g. neo. for a male, 0·45 for a female, and 0·2 bi for both, twice weekly, to a total of ten double injections. The Wassermann reaction should be done at the outset, and also after each of the first three injections, and if any one reaction is positive, the whole course should be repeated after an interval of five weeks. If the reaction has never been positive, the first course may be extended to twelve injections, and this made to suffice. If after the first course the Wassermann reaction is ever again found positive, further treatment must be given, but the great majority of primary cases, and many secondary, will be found to be permanently negative after two courses. The Wassermann reaction should be done at least every three months for two years, and yearly thereafter, and the C.S.F. examined from eighteen months to two years after cessation of treatment. Extreme variations in weight may indicate some variation

from the above scheme, and the slightest sign of intolerance should receive careful consideration, but intolerance is no more frequent with this intensive treatment than with longer-drawn-out schemes, while a much higher proportion of patients are treated to a conclusion. The time-factor is more important in the treatment of early syphilis than the total dosage.

How would you treat Late Syphilis ?

The sufferer from late syphilis is frequently the subject of chronic arterial and visceral disease, and no hard-and-fast rules can be laid down for dosage. Often it is wise to commence with KI by the mouth, and after several weeks to give neosalvarsan in small doses (0·15 to 0·3), increasing to 0·45 or even 0·6 if the injections are well borne. Robust subjects can be given full doses, as for early syphilis, with advantage. Bismuth intramuscularly is often useful for a preliminary course, and Mercury, in the form of Hydrag. 5 Creta by the mouth, has a slower but prolonged effect. Tryparsamide, 1·0 to 3·0 g. intravenously, is useful in neurosyphilis, particularly paresis and tabes. Not all cases respond, but quite remarkable improvement is not uncommon. Even interstitial keratitis, which until recent years was regarded as quite intractable, has been found to yield to intensive therapy.

What is Congenital Syphilis ?

By this is meant syphilis acquired during intra-uterine life, and the clinical picture varies according to the exact time of infection. The placenta may be regarded as the primary sore, and if the stage of generalisation occurs early in the pregnancy, abortion or stillbirth is likely ; if a little later, the child may be born alive, but with congenital syphilis. Often an infected woman will have a number of stillbirths, but ultimately the infection seems to become attenuated, and living children are born, with syphilis of greater or less severity. A syphilitic child is weakly and thin, wrinkled and old-looking. Often there is chronic nasal catarrh, giving rise to the well-known "snuffles," and the child is restless and cries day and night, the cry being feeble, and of a characteristic timbre. The rash may be papular, but is most often bullous, and most marked

on the palms, soles, and gluteal region. These children usually die soon, but if they survive they show later such lesions as condylomata, a curious eczema oris, and still later a saddle-like depression of the bridge of the nose, and notched " Hutchinson's " teeth. Interstitial keratitis is another late sign. Gummatous or nodular lesions of tertiary type may occur, and bony changes, particularly in the long-bones and the skull, are well known.

How would you diagnose Congenital Syphilis ?

Before birth, a history of repeated miscarriages should lead to the performing of the Wassermann on the mother, and if it be positive, she should receive a course of neosalvarsan, which will in a large percentage of cases result in the birth of an apparently healthy child. Mercury is comparatively ineffective. After birth the appearance of the child is usually quite typical, but impetigo bullosa may simulate the bullous rash, and the raised stains left by erosions on the buttocks in neglected children (" syphiloïde post-érosif " of Jacquet) may simulate the papular form. In both cases the general condition of the child should give the clue, and in the case of syphilis there will probably be mucous-membrane lesions, the spirochæte may be found, and the Wassermann may be positive in the mother, and certainly will be in the child. Later " Hutchinson's Triad "—pegged teeth, saddle-nose, and interstitial keratitis—forms a typical picture, and the cutaneous lesions may be diagnosed on the same lines as the similar lesions in acquired syphilis. The Wassermann is of the greatest value, especially in mild cases without the characteristic stigmata.

How would you treat Congenital Syphilis ?

The preventive ante-natal treatment has already been given. An infant may be given sulfarsenol intramuscularly in doses of 0·01 to 0·06 gram, or neosalvarsan intravenously, using a scalp vein, or even the superior longitudinal sinus, through the anterior fontanelle. In addition, and subsequently, grey powder, $\frac{1}{2}$ to 1 grain, t.i.d., may be given by the mouth. Cases in older children should be treated on the lines of tertiary acquired syphilis.

NÆVI AND NEOPLASMS.

What is a Nævus?

A birth-mark. It is a congenital abnormality of the skin, and may take several forms. Although congenital, nævi often grow after birth, and in fact are not uncommonly so small at birth as to escape notice. The common forms are the spider-nævus, the capillary nævus, and the cavernous nævus.

Describe the Spider-nævus.

This is seen on the face, often the nose, and generally does not grow to a size to attract attention until adult life. It consists of a central venule with radiating branches. It is best treated by electrolysis of the central vessel, when the branches will disappear also.

Describe the Capillary Nævus.

This, often called "port-wine mark," may occur on any part of the body. It consists of closely-set dilated capillaries, and shows as a dusky-red area, on which not infrequently there are small, raised, erectile tumours, which are of the nature of cavernous nævi. This variety tends to grow during childhood up to a point, and then becomes stationary for life. Small areas may be treated with radium or CO_2 snow, but there is certain to be some scarring, and larger areas are best left alone, as the patch-work result of treatment is often more unsightly than the original nævus. Where clean excision is practicable, this is the measure of choice.

Describe Cavernous Nævus.

This, known also as cavernoma and "strawberry-mark," consists of a mass of large blood-spaces with thin walls, and appears as a raised tumour, bright red to purple in colour. Its size is often variable, being increased when the child cries. The overlying skin is often thin, and ulceration and secondary infection are not uncommon. This type is often inconspicuous

at birth, but soon commences to grow. It may occur on any part of the body. Both CO_2 snow and radium have given excellent results in treatment.

What is Linear Nævus ?

This, also known as ichthyosis hystrix, is an epidermal anomaly, and shows as raised hyperkeratotic patches, which are often in the form of long streaks. The patches are hypertrichotic, and cutaneous horns may develop. The best treatment is excision, if practicable, and, failing that, diathermy or the electro-cautery. Freezing is not usually effective.

What are Moles ?

Moles are small tumours of the skin which consist of masses of cells derived from the epidermis. They may be pigmented or unpigmented. They often show hypertrichosis. They may be the starting-point of melanotic carcinoma. Freezing, electrolysis, and diathermy all give good results in suitable cases, but if there are signs of rapid growth wide excision should be performed.

Describe Warts.

Warts are papillomata of the skin, and may be single or multiple. Single ones may be frozen, or destroyed by electrolysis or diathermy. Radium is very successful. When very numerous, X-rays may cause their disappearance, or ionisation with magnesium, and the internal administration of magnesium sulphate, may cure. A special variety of wart is known as condyloma acuminatum or venereal wart. It appears on the genitalia or at the anus, in the form of long filiform outgrowths. It is often, but not necessarily, associated with venereal disease, and is best treated by snipping off with scissors and touching the base with a caustic.

What are Senile Keratoses ?

These are wart-like growths occurring in the aged, or in persons who have been much exposed to the sun and weather. They vary from brownish macules to raised verrucose growths,

with marked hyperkeratosis, and are of importance on account of their tendency to degenerate into carcinoma. In the early stages a 2 to 4 per cent. salicylic ointment may cure and later freezing is very successful, or painting with Trichloracetic acid.

What is Molluscum Contagiosum ?

This is a disease characterised by the appearance in the skin of one or more small tumours, which are pearly-looking, have a dimple in the centre, and on pressure yield a cheesy material. This on microscopic examination is found to contain enormous numbers of oat-shaped bodies, which stain intensely with eosin. They are known as molluscum-bodies, and are degenerated epidermal cells. The tumours are generally small, but occasionally reach the size of a pyjama-button. They are contagious, and auto-inoculable, and often one or two initial lesions are followed by an extensive crop. The disease seems to be due to a filter-passing virus. The diagnosis is easy, if the disease be borne in mind. Rodent ulcer resembles, but has no expressible core. A solitary lesion which has suppurated might give trouble, but almost always the characters are not entirely destroyed. Small lesions may be treated by squeezing out the core, and then inserting a match-stick dipped in pure phenol. Larger ones may have to be removed by scraping or cutting. The X-ray will often cure.

What Simple Connective-tissue Tumours are met with in the Skin ?

Fibromata and lipomata are not common. Multiple neurofibromata are seen in von Recklinghausen's Disease. Treatment is surgical in the case of isolated growths, and nil in the multiple cases. Another tumour is xanthoma, which is a granuloma developed round a deposit of cholesterol in the corium, and may take several clinical forms. One form is xanthelasma palpebrarum, which appears as yellowish flat, or slightly raised patches on the eyelids, in elderly subjects. Where there is excess of cholesterol in the blood, as in diabetes and jaundice, xanthomata may appear anywhere on the body, but are commonest at the elbows and knees. Occasionally

there is an almost universal distribution of the tumours. They are of a reddish-yellow colour, and with the pressure-glass present a frank yellow, which is diagnostic. Solitary lesions may be excised or frozen, but the best plan is to treat the underlying condition by giving a cholesterol-free diet, with insulin, if indicated.

What Sarcomata are found in the Skin ?

Apart from secondary growths, which will not be considered, fibrosarcoma may arise in the skin, but the two most important are melanotic sarcoma, and Kaposi's sarcoma. The melanotic growths of the skin are often carcinoma, but some may be sarcomatous. They arise mostly from pigmented warts, occasionally in the nail-bed on hand or foot, and are characterised by rapid spread, and great malignancy. Surgery affords the only hope, as they are resistant to X-rays and radium. Kaposi's " multiple benign idiopathic hæmorrhagic sarcoma " is seen mostly in middle-aged Jews from Eastern Europe, but is not unknown in native Britons. It appears first on the extremities in the form of purplish macules and raised plaques, and later tumours arise which are deep purple to black in colour. These enlarge slowly and tend to ulcerate. The course of the disease is very chronic, and death may ensue after many years, while recovery is possible. The treatment consists of arsenic by the mouth or by injection and X-rays.

What is Mycosis Fungoides ?

A rare disease in which fungating tumours appear on any part of the body, grow rapidly, break down, and ulcerate. Often the tumour stage is preceded for months or years by an intractable itching dermatitis. The disease may be checked by arsenic, and the tumours may for a time be caused to disappear by X-rays, but ultimately they lose their effect, and the patient dies.

What Types of Carcinoma are seen in the Skin ?

Apart from secondary cancers, which will not be considered, the main types are the basal-celled and the prickle-celled.

Give an Account of Basal-celled Carcinoma.

This group of tumours is relatively slow-growing, and shows only local malignancy. It commences characteristically as a small pearly growth, most often on the face, sometimes arising from a senile keratosis. The growth enlarges slowly but steadily, and may attain a considerable size without ulcerating, or more commonly ulceration is fair early, and more or less keeps pace with growth, so that there is presented the picture of a chronic ulcer, with a raised, sinuous, pearly border, over which dilated venules may be seen coursing. This is the typical "rodent ulcer." In another type ulceration is so early and complete that there is little to be seen but a deep, chronic, fairly rapidly extending ulcer. This is the so-called terebrant type. Basal-celled cancers as a rule show no tendency to form metastases, but once they have penetrated beneath the corium, and in particular when they have involved bone or cartilage, they are extremely difficult to eradicate, and in their later stages they may give rise to hideous deformity, destroying great parts of the face and leading to death from sepsis, hæmorrhage, or meningitis. It is a disease of mature life, but occasionally commences comparatively early, even in the twenties.

Discuss the Diagnosis of Basal-celled Carcinoma.

Before ulceration has occurred, it may be distinguished from a mole by the fact that it is a fresh development, while the mole has probably been there from birth, and also the fact that it is steadily growing. Moles are often pierced by hairs, and are pigmented, while basal-celled growths are not. From molluscum contagiosum by the absence of any core which can be expressed and of the "molluscum-bodies," while molluscum is rarely single. When ulceration has occurred, the appearance of the chronic ulcer, shallow at first, with the hard pearly border, traversed by dilated venules, is diagnostic.

What is the Treatment for Basal-celled Carcinoma?

Radium, in the form of a plaque for surface application, will cure most cases. The modern technique, with filtration, and

the use of a small quantity over a long period, is successful even in many advanced cases. Curetting with a sharp spoon, followed either by freezing for sixty seconds with solid CO_2 or by a massive dose of X-rays (4 to 6 B.) will cure almost all early cases. Excision, even when a wide margin is available, is frequently followed by recurrence, even after years.

Give an Account of Squamous Carcinoma of the Skin.

Squamous or prickle-celled carcinoma is common on the mucous membrane of the mouth, especially at the muco-cutaneous junction, but on the skin proper is only moderately common. It arises often on an old scar from a burn, or from lupus vulgaris, and also sometimes from a senile keratosis, or the similar lesions seen in tar-workers and in xerodermia pigmentosa. It is also a special feature of old X-ray scars. In addition, carcinoma occasionally arises on apparently normal skin, especially on the nose or cheeks. It appears first as a red papule, which, as it enlarges, may develop a horny centre, and ultimately ulcerates. The developed picture presents a foul ulcer, with irregular exuberant base, and prominent rolled edges. Metastasis occurs late, if at all, and it is mainly by its local malignancy that it kills. The regional glands may, however, be involved fairly early.

What is the Prognosis of Squamous Carcinoma ?

Good in the early stages. Metastasis is late, and early treatment gives a better chance of cure than in almost any other form of cancer. The prognosis becomes steadily worse as the disease advances.

How would you treat Squamous Carcinoma ?

In early primary cases, excision with a moderate margin is all that is required. Early epithelioma on a scar is best treated by curetting with a sharp spoon, followed by the application of fused chromic acid, or by freezing for 60 seconds. More advanced cases require extensive surgical removal of primary lesion and glands, while inoperable cases may often be relieved, and sometimes apparently cured by radium.

ATROPHIES, HYPERTROPHIES, AND PIGMENTARY ANOMALIES.

What Atrophic Conditions of the Skin are met with ?

Atrophy of the skin is generally a result of injury, or some inflammatory or destructive process, but primary atrophy occurs in connection with nerve-injury—" shiny skin "—and as an apparently distinct dermatosis, known as anetodermia. It is of little importance.

What are the Hypertrophies ?

Ichthyosis, keratosis, and sclerodermia.

Give an Account of Ichthyosis.

This is a congenital condition, characterised by excessive development of the horny layer, leading to the formation of scales. There are all degrees of severity, from a simple dryness of the skin, known as xerodermia, to cases where the whole skin-surface is rough and covered with discoloured scales. In all but the most severe cases the face escapes, and the knees, elbows, glutei, and anterior axillary folds are most affected. The hair is often dry and thin. There are few subjective symptoms, beyond a feeling of tightness, but there is an increased liability to eczema. There is no cure, but frequent baths, and the use of a 2 per cent. salicylic acid ointment, will do a great deal to alleviate the condition, and small doses of thyroid are worth trying.

Give an Account of Sclerodermia.

This is an inflammatory disease of the skin, characterised by hypertrophy of the white fibrous tissue, with subsequent atrophy. It occurs in three forms, the diffuse, the linear or band type, and the macular. The essential characters of all types are the same. In the early stages the skin is swollen, and of a board-like hardness. The colour is whitish or yellowish, with a very characteristic lilac border. As the disease pro-

gresses, the swelling gradually subsides, and contracture occurs, leading in the limbs to deformity and loss of function, and on the trunk in severe cases to interference with respiration, occasionally to the extent of being fatal. Mild cases may recover with only slight traces of scarring, and this is commonest in the diffuse type. The etiology is quite unknown, though attempts have been made to associate it with endocrine deficiencies. The prognosis is good as regards life in all but the most severe generalised cases, but some scarring and deformity is likely to be left. The duration of the active stage is weeks or months. In the active stage the only remedy which has seemed to give any results is thyroid gland, which may be given in full doses, preferably with the patient in bed. Later, radiant heat, electricity, and massage all help to render scars soft and pliable, and in the case of the limbs splinting may prevent the worst degrees of contracture.

Give an Account of Vitiligo.

This, also known as leucodermia, is a condition in which the pigment is removed from areas of the skin, and seems to be collected at the margins of the white patches. The etiology is unknown. Congenital syphilis has been blamed, but there is no evidence of this. The disease tends to progress slowly, but arrest, and even some degree of improvement is not uncommon. Treatment is valueless, but the careful use of a stain, such as walnut-juice, may serve to conceal the light patches.

DISEASES OF THE APPENDAGES.

What is Alopecia Areata ?

This is a disease characterised by loss of hair, generally in sharply defined patches, but occasionally involving the whole scalp, and even the hair of the face and body. On the involved areas the hair is partially or completely lost, and the scalp becomes shiny and appears atrophied, but close inspection shows that the follicles have not been destroyed. Often a few hairs remain here and there on the bald area. At the margins

there are to be seen hairs which are thicker at the free end than at the point of entrance into the follicles, these being called "exclamation-mark" hairs. They indicate that the disease is still active, and are almost pathognomonic. The disease commonly extends at one point while recovering at another, and is very chronic. The first regrowth is of a fine lanugo-like character, and may be grey. Later the colour may return, but even in children the grey colour may be permanent. A peculiar form is the so-called ophiasic type, in which there is a complete band of alopecia round the scalp.

Discuss the Diagnosis of Alopecia Areata.

From various kinds of tinea, by the points mentioned under that head, and from lupus erythematosus by the absence of redness, scaling, and scarring. The smooth, but not atrophied scalp, and the "exclamation-mark" hairs are diagnostic, and a regrowth of depigmented hair confirms.

What is the Prognosis of Alopecia Areata?

Most cases recover in from two to eighteen months, but recurrence is not uncommon. The older the patient, the worse the prognosis. The extent of the alopecia also affects the outlook, and involvement of the hair of the face, and still more of the body, is of bad omen.

How would you treat Alopecia Areata?

Focal sepsis, and any possible source of nerve-irritation should be sought for and treated if found. General tonics are useful, and a good prescription is Easton's Syrup, ℥i, with liq. arsenicals, ♏i, t.i.d., p.c. Locally the indication is to promote hyperæmia, and this may be done by rubbing the patches twice daily with 20 per cent. lactic acid, or with Liq. ammon. fort., or even in obstinate cases with an ointment of chrysarobin, 4 or 5 per cent. Electrical methods, such as high-frequency sparking, the mercury-vapour lamp, and small doses of X-rays, may all succeed at times, and have the advantage of being clean.

Give an Account of Hypertrichosis.

This is an abnormally strong growth of hair in places where there is normally only lanugo, especially on the lips, chin, and cheeks in women. Treatment is difficult. Slight cases can be dealt with by electrolysis, and severe cases should be advised to use a safety-razor. Permanent epilation can be achieved by X-rays, but no matter how careful the technique, there is a great risk of subsequent atrophy of the skin, with telangiectases, and it is only in exceptional cases that the method is justifiable.

Give an Account of Hyperidrosis.

Excessive sweating may be general, unilateral, or local. It seems to depend on overaction of the sympathetic. Local hyperidrosis occurs most often on the hands and feet, and in the axillæ. It may be treated palliatively by dusting-powders, or by bathing with 5 per cent. formalin, or more radically by the X-rays, keeping well within the limit of safety as regards subsequent atrophy.

FORMULÆ.

1.

LOTIO CALAMINÆ.

℞

Calaminæ præp. . ℥iv
Zinci Oxidi . . ℥ii
Liq. Picis Carbonis
Glycerini . āā ℥ii
Aq. Camphoræ ad . ℨviii

SIG.—Shake well, and apply with a soft brush four or five times a day.

2.

LOTIO PLUMBI ET PICIS.

℞

Liq. Plumbi Subacetatis Fort.
Liq. Carbonis Deterg.
Glycerini . . āā ℥ii
Aq. Camphoræ ad . ℨviii

SIG.—Dab on frequently, or at each change of dressing.

3.

LINIMENTUM ICHTHYOL ET CALAMINÆ.

℞

Ichthyol . . . ℥ii
Calaminæ Præp. . ℥iii
Olei Lini . . .
Aq. Calcis . āā ℨiv

SIG.—Shake well, then wring dressing-cloth out with the liniment, apply to parts, and bandage on.

4.

TAR PASTE (MILIAN).

℞

Crude Coal Tar
Zinci Oxidi . āā ℥ii
Lanolini
Paraffini Mollis āā ℥iii

SIG.—M. sine calore.

Spread thickly on dressing-cloth, bandage on, and change once daily, cleaning the parts with warm oil at each change.

5.

℞

Ac. Salicyl
Camphoræ . āā grs. x
Pulv. Amyli
Talci . . āā ℥iv

SIG.—The Dusting Powder.

6.

EUGALLOL OINTMENT FOR PSORIASIS.

℞

Ac. Carbol. Liq. . ♏x
Ac. Salicyl.
Eugallol . . āā grs. xxx
Ung. Lanolini . . ℥i

Misce.

SIG.—To be rubbed on night and morning.

7.

FOR PSORIASIS.

℞

Hydrag Ammon.
Ac. Salicyl. . āā grs. xx
Ol Rusci . . . ℥i
Ung. Lanolini . . ℨi

Misce.

SIG.—To be rubbed on night and morning.

8.

For Seborrhœa.

℞

Ac. Salicyl
Resorcini. . āā grs. x to xx
Ung. Lanolini . . ℥i
Misce.

Sig.—The ointment.

9.

℞

Ac. Salicyl. . . grs. v to x
Liq. Carbonis Deterg. ♏x
Ung. Ac. Bor. . . ℥i
Misce.

Sig.—

10.

Lotion for Seborrhœa Capitis.

℞

Resorcini. . . ℥ii
Glycerini. . . ℥ii
Spiritus Rosmarini . ℥iv
Aq. Camph. ad . ℥viii
Misce.

Sig.—

11.

Lotion for Seborrhœa

℞

Hydrarg. Perchlor. . grs. ii
Glycerini. . . ℥ii
Spt. Rosmarini . ℥iv
Sol. Ac. Bor. Sat. ad ℥viii
Misce.

Sig.—

12.

Ointment for Scabies.

℞

Sulphuris Præcip. . grs. xl
Ung. Lanolini . . ℥i
Misce.

Sig. — To be rubbed in thoroughly after a hot bath.

13.

For Scabies.

℞

Beta Naphthol . grs. xx
Ung. Lanolini . . ℥i
Misce.

Sig.—To be rubbed in after a hot bath.

14.

For Scabies in Infants.

℞

Styracis Præp. . ℥i
Ung. Zinci . . ℥i
Misce.

Sig.—To be rubbed on after a hot bath.

15.

Brooke's Paste.

℞

Acidi Salicylici. . grs. xv
Hydrarg. Oleat. . grs. xx
Zinci Oxidi
Pulv. Amyli . āā ℥ii
Paraffini Moll. ad . ℥i
Misce.

Sig.—

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