general symptoms, severe oedema with often a large quantity of albumin in the urine and sometimes blood. Of these 13, 4 showed very definite retinal changes and 4 changes of a slighter nature.

As far as could be ascertained, there were no signs of any other complicating disease, with the exception that several cases showed malarial infection. In none was there any history of previous kidney attacks. In 9 of the cases presenting the more severe retinal changes a Wassermann test was done, and in all of the 9 the result was negative.

Some points in regard to the fundus changes are:

1. That while the spots of exudation were generally in the usual situations—that is, near the disc and in the macular area—in no case was seen the typical silvery star-like figure of the chronic cases as figured in the textbooks.

2. Haemorrhage was not common. Those seen were of the small punctate variety, and not of the striate or flame-like character.

3. The optic disc was often affected, the changes varying from a definite swelling to slight wooliness and indistinct edges.

4. Small areas of oedema were noticed, especially along the course of the veins.

5. An important point was that in several of the series I was able to trace the gradual absorption of some of the smaller patches of exudation, and the healing process was very interesting to watch.

Summary.

To sum up the matter, I would say:

1. That in this disease the retina is very liable to be involved, although gross changes are not evident in the early stages, and latterly changes which had been present may have become absorbed.

2. That the pathology is probably an acute congestion resulting from some specific toxin, that the exudation which ensues is partly lymphoid and partly cellular in nature, and that this deposit probably clears up in the great majority of cases, without leaving any permanent results.

3. That the retinal changes do not affect the prognosis, except in so far that the severer these changes the severer the cases, in many instances, though by no means necessarily so.

4. That the condition is one which is probably allied to the acute retinitis of pregnancy, scarlatina, and acute uraemia, and should not be confounded with the retinitis of chronic kidney inflammation with its permanent changes in the retinal circulation vessels and tissues.

I have to thank my colleague, Dr. Elizabeth Moffett, for her help and assistance, and also the C.O. of Valletta Military Hospital, Lieut.-Colonel Slaughter, R.A.M.C., for his kind permission to publish these notes.

SYCOSIS AND OTHER CHRONIC STAPHYLOCOCCAL INFECTIONS OF THE SKIN, AND THEIR PREVENTION.

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At the present time considerable numbers of able-bodied men become invalided on account of chronic staphylococcal infections of the skin. These infections include: (1) Sycosis menti, and similar affections of other hairy parts, namely, the upper lip, the eyebrows, the eyelashes, the scalp, and the pubes and axillae; (2) chronic furunculosis; (3) chronic eczematized impetigo of the trunk and extremities.

The majority, probably all, of these cases could be avoided were the initial skin complaint correctly diagnosed and efficiently treated.

These staphylococcal infections may be all included under one term—impetigo of Bockhart; and an important fact not generally recognized is that they always, or nearly always, arise as a secondary complication of another form of impetigo—impetigo contagiosa of Tilbury Fox—an affection which is comparatively easy to cure.

The distinctions between the two groups of impetigo—first clearly demonstrated by Sabouraud in 1900—are not

even yet sufficiently known, probably because they are not pointed out, or not pointed out sufficiently clearly, in textbooks devoted to diseases of the skin. The distinctive characters of these two kinds of impetigo may be summarized as follows:

Impetigo Contagiosa of Tilbury Fox.

This is a highly contagious skin complaint due to the *Streptococcus pyogenes*. The characteristic lesions are the amber-coloured stuck-on crusts, which are formed by the dried-up serum of vesicles or blisters. In other words, the lesion resulting from streptococcal invasion of the surface of the skin is a superficial blister, which contains clear serum, which so rapidly dries into a crust that the early vesicle is usually unobserved. If, however, we remove the crust with forceps, we see a superficial erosion, with an overhanging fringe of the horny layer of the epidermis, which has exactly the appearance of, and indeed is, the floor of a broken blister.

This streptococcal impetigo contagiosa is of very common occurrence among children of the poor in the form of a crusted eruption upon the face or scalp. It is seen sometimes, too, as an epidemic among public school boys as what is known as "scrum-pox." It not infrequently attacks the chin and cheeks of male adults as a result of infection while being shaved. It occurs also on the limbs and trunk as a complication of scabies. In soldiers it is seen particularly in these two latter forms, on the head and cheeks or upper lip, as a result of a visit to the barber, and on the limbs and trunk and sometimes the face, in association with scabies.

It is from these two generally easily cured forms of impetigo contagiosa that arise most of the incurable staphylococcal infections—sycosis, furunculosis, and chronic impetigo—which may be grouped together as impetigo of Bockhart.

Impetigo of Bockhart.

This is a staphylococcal infection of the hair follicles which results in the formation of perifollicular pustules. The pustules may be small and closely set on some hairy region, as in sycosis menti, or they may be larger, and scattered over the trunk and limbs, as in furunculosis. In contrast with the superficial vesicular lesion of impetigo contagiosa, that of impetigo of Bockhart is a deeply seated pustule. The streptococcal invasion leads to a superficial serous exudation; the staphylococcal infection to an exudation of polymuclear leucocytes or pus cells, deeply in the tissues round a hair follicle.

Treatment of Streptococcal Impetigo.

In spite of the often formidable appearance of a streptococcal impetigo and of its tendency to spread rapidly, it is, on account of its superficial character, generally very easily cured by appropriate treatment. The staphylococcal impetigo, on the other hand, because of the deeply seated infection, is much more difficult to deal with, and many cases of long standing seem to be practically incurable. Herein, then, lies the importance of the early diagnosis and cure of impetigo contagiosa, since, as has already been said, nearly all, if not all, cases of incurable, or difficultly curable staphylococcal infections of the skin arise as a complication of uncured impetigo contagiosa. The usual sequence of events in these circumstances is as follows: A man gets a simple impetigo contagiosa of the chin and cheeks—superficial, amber-coloured, stuck-on crusts, which rapidly increase in number and extent. The eruption is perhaps diagnosed as eczema, or it is correctly diagnosed but not treated in exactly the right way, and as a consequence the eruption persists, and the vesicles and the crusted erosions become secondarily invaded by staphylococcus. The staphylococcus, once established, invades the hair follicles, and little follicular papules and pustules begin to appear. Soon the whole beard region becomes involved, so that every hair follicle is the site of a papulo-pustule, though the discharge from the conglomerated papulo-pustules often dries as a crust, which covers the chin and masks the follicular nature of the eruption. The condition is then that of sycosis menti, a most obstinate affection to deal with. The man remains under treatment in hospital for months, sometimes years, and has treatments by ointments, by vaccines, and by x rays. But the sycosis remains uncured.

In many instances the sycosis does not remain limited to the beard region, but attacks also the eyebrows and eyelids, the scalp and the upper lip, the pubes and the axillae, and a furunculosis of other parts of the skin, of the neck, or the trunk or the limbs may be added to his other affliction.

In the second type of case the man has scabies complicated by turbid vesicles on the hands and feet, and crusted patches on the limbs and trunk. On the buttocks there is often a more severe type of impetigo contagiosa—that is, ecthyma, in which the crusted erosion is converted into a shallow ulcer with inflamed base, and with or without a dirty-brown crust.

Most of these cases of impetigo complicating scabies yield in the early stage to the three hot-water and soft soap baths, and the three sulphur ointment applications of the treatment for the scabies. But cases not treated early and thoroughly may develop later a generalized eruption of boils—that is, a chronic furunculosis, or they may be converted by scratching into eczematized impetigo, with eczema-like, infiltrated, itchy, crusted areas on the limbs and trunk, which often resist all treatment.

The Treatment of the Initial Impetigo Contagiosa.

The whole secret of success in the treatment of the initial impetigo contagiosa is to remove first of all every trace of crust and every overhanging blister margin. This is best and simplest done by prolonged and frequent mopping with hot water. The patient is made to mop off the crusts by bathing the affected parts for half an hour two or three times daily. At the same time all crusts must be carefully wiped off with wool or picked off with forceps. Immediately after the bathing the eroded surfaces are mopped with lotio hydrarg. perchlor. 1 in 6,000, or with lotio cupri sulphatis 1 in 8,000; then an ointment (ung. hydrarg. ammon. chlor., gr. x ad 3 j) is smeared on, to remain until the next mopping. When the impetigo complicates scabies and involves the limbs and trunk, it may be necessary to continue the hot baths beyond the three prescribed for the scabies treatment, and to substitute ung. acid. boric. for the ung. sulphuris after the third sulphur ointment application. Obstinate patches of ecthyma are best treated by complete removal of the crusts by repeated mopping with hot water, followed by careful and thorough application to the shallow ulcer of argent. nitratis gr. xv, spirit. aetheris nitrici 3 j.

The Treatment of Staphylococcal Infections of the Skin.

This is a much more difficult theme. The once much-vaunted treatment by vaccines has not proved the panacea it was proclaimed. In quite early cases of staphylococcal infection it is, however, worth a trial, for here it does sometimes seem to give remarkably good results. But, while even in early infections its results are uncertain, in long-standing chronic sycoses and furunculosis it lamentably fails, and often does harm. The x-ray treatment of sycosis has given equally disappointing results. It is always possible, by complete depilation, with x rays, to produce what at first appears to be a cure, but almost invariably the disease relapses so soon as the hair grows again. We are generally compelled, therefore, to resort to the older methods of treating sycosis, and in cases where the infection is limited to the upper lip, to the "imperial," or to a part of the chin, cures may be eventually brought about by repeated depilation with forceps and applications of antiseptic ointments. The patient is taught to extract with forceps as many hairs as possible daily for weeks or months, and daily he rubs in an antiseptic ointment, such as ung. hydrarg. oleat. 5 per cent. or ung. iodox. But when the whole scalp, as is sometimes the case, or other extensive areas are involved, this treatment is impracticable. For very limited areas, as the eyebrows and upper lip, or imperial, an often completely effectual remedy is the application once or twice weekly of pure carbolic acid, carefully dabbed on with a match stick or very small swab of absorbent wool.

In the treatment of furunculosis, vaccines of staphylococcus may be given in doses of 50 to 150 million weekly. Larger doses are better avoided, as they often lead to over-stimulation and an exacerbation or spread of the infection.

Much may be done to prevent fresh infections by

constant change of linen; by frequent baths (baths of copper sulphate 3ss to 20 gallons); by antiseptic lotions mopped over the whole area involved (lot. hydrarg. biniodidi 1 in 10,000); and by individual attention to each boil. The earliest lesions should be painted over with a drop of pure carbolic acid. Larger boils may be fomented, but they may generally be made to dry up rapidly by the following method: Into the central point of the boil a pointed match stick which has been dipped in pure carbolic is gently inserted. This smart at first, but the carbolic acid soon numbs the pain. The match stick is again dipped into the carbolic and put more deeply into the boil. It will then be found that an opening has been made and that the pus can be gently squeezed out. A small wad of absorbent wool is now tightly wound round the ends of a fine forceps and dipped into pure carbolic. The carbolic-soaked wad is then used to thoroughly mop out the cavity of the boil, and finally some pure carbolic is painted over the surface of the boil and a piece of dry wool put over it. In twenty-four hours the boil will have almost subsided, and in a day or two it will have disappeared. By diligently attacking every fresh boil in this way we may succeed eventually in stamping out the infection, but disappointment sometimes follows by a recrudescence of crops of boils at a later period.

The treatment of chronic eczematized impetigo of the limbs and trunk, which is so often a sequel of scabies complicated by impetigo contagiosa and not properly treated in the beginning, is even more unsatisfactory than that of a mere furunculosis; for the scratching induced by the itching not only keeps going the eczema, but leads to fresh crops of follicular pustules and boils. Sometimes these chronic eczematoid impetigos yield to an ointment of pyrogallic acid gr. j in ung. zinci oxidi 3 j, or to applications of small doses of x rays. But more often they persist in spite of the treatment, to the despair of the medical officer.

The early recognition and right treatment of the streptococcal impetigos—impetigo contagiosa of Tilbury Fox—is, then, the only sure method for the elimination of these obstinate and often incurable staphylococcal infections which arise as a sequel to the initial and more easily overcome streptococcal infection.

THE TREATMENT OF PSORIASIS BY X-RAYS AND CHLORINE IONIZATION.

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CONSIDERING the obstinate, rebellious nature and the chronic and recurrent course of psoriasis, its depressing effect and the despair of the patient are not at all surprising. Nor is his lack of patience, perseverance, and co-operation in carrying out a prolonged, tedious, and disagreeable course of treatment astonishing.

Arsenic is found to be the most valuable and the most constant in its effects. It is the favourite drug given internally in increasing doses for a long period. Its prolonged administration is, however, attended by remote ill effects and dangers, such as gastro-intestinal and nervous disturbances, general pigmentation of the skin, keratosis of the skin (especially the palms and soles), callosities, warts, horny formations, and even cancer. Chrysarobin is the most powerful and generally used local remedy. It stains both the garments and the skin and excites dermatitis of the surrounding skin and severe conjunctivitis if the eyes are touched. It is, besides, a very disagreeable application which necessitates confinement to bed or to the house, and necessarily interferes with the patient's occupation.

In the following case the rapid involution of the eruption, the painless, clean, and agreeable nature of the treatment, which does not interfere with the patient's occupation, and takes up only a few minutes to half an hour a week, and its freedom from remote ill effects and dangers when properly applied, are worthy of attention.

A boy, aged 15 years, of otherwise good general health, in the summer of 1914 presented a dry, scaly, papular eruption on the palms, back of the hands, and webs of the fingers—more on the left side. There was no itching. There was some thickening of the skin of the left palm. With the advent of winter the