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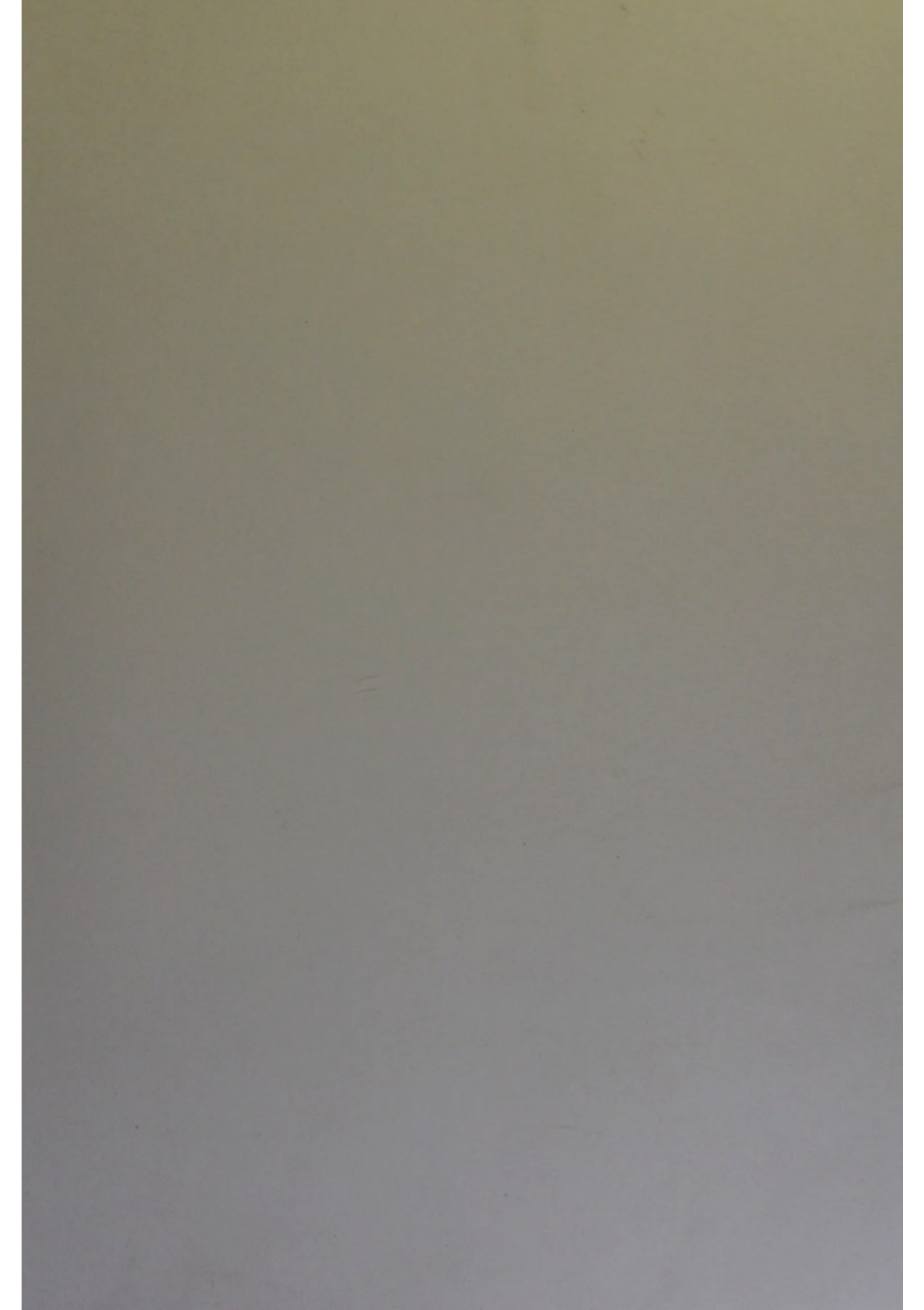
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NOTES ON A FEW
CASES OF LUPUS TREATED
IN THE
ELECTRICAL DEPARTMENT
OF THE
WESTERN INFIRMARY.¹

By DONALD J. MACKINTOSH, M.B.,
Medical Superintendent.

THE treatment of lupus by light, as instituted by Dr. Finsen, of Copenhagen, was begun in the Western Infirmary early in December, 1901, on the presentation to the hospital of an installation by the Exhibitors' Club of the Glasgow International Exhibition. The installation consisted of lamps of the London Hospital pattern, and additions have since been made of a Bartholomew lamp, a Tesla's high-frequency apparatus, &c.

At the commencement of the light treatment, a test exposure of ten minutes to a current of 10 amperes is given, and if the reaction be not too violent, the sitting is increased to fifteen or twenty minutes, and the current to 12 amperes, care being

¹ At the March meeting of the Glasgow Medico-Chirurgical Society, held in the Western Infirmary, I showed a number of cases of lupus which were at that time under treatment in the Electrical Department. It was at first intended that short clinical histories of a few of the cases should be incorporated in the report of the meeting, but, in response to a request by the Editor, I have extended the notes and added a few photographs.

taken by the nurse in charge that the part to be treated is kept closely applied to the lamp to ensure its being rendered as anæmic as possible. In a small number of cases, such violent inflammatory reaction, with vesication, has occurred, that the time of exposure has been reduced to five minutes, and in certain cases, the treatment has been discontinued for some days to allow the skin to recover from the blistering. In other cases, no satisfactory reaction has appeared until the



CASE I.—J. K.

patient has been under treatment for some days, or even weeks, and, roughly speaking, it is possible to foresee the ultimate result from the degree of reaction—the greater the reaction to the test exposure, the greater the hope of ultimate cure. The time of exposure and strength of the current used are always regulated by the patient's idiosyncrasy, while, at the same time, our endeavour is to subject the patient to the maximum exposure of twenty minutes to a current of 12

amperes. The reaction in most instances follows immediately on the exposure, but the patient is not conscious of any unusual sensation until some hours afterwards, when he experiences, if the reaction has been good, heat and tingling in the part treated; while, at the same time, the local redness seen immediately after the exposure is intensified. In no case has the patient complained of actual pain in the part.

In the treatment of lupus, both the London Hospital pattern



CASE I.—J. K.

of lamp and the Bartholomew lamp are used, the Bartholomew lamp being, from the ease with which it can be manipulated, especially suited to the treatment of lupus on the trunk and extremities. After long-continued treatment with either lamp, the tissues appear to lose to some extent their power of ready reaction, and we have found that a change from the London Hospital lamp to the Bartholomew lamp and *vice versa* is, under these conditions, followed by a

renewal of the activity of reaction. The place of the high-frequency current in the treatment of lupus is not yet thoroughly established, and, while many have found that superficial patches of lupus, where there are no deep focal points, are greatly benefited by its application, we have not employed it alone in any case of lupus of the skin. When, however, the affected area has become skin-whole after treatment by the light, we employ the high-frequency



CASE II.—B. S.

current in the treatment of the scar. Even after the surface is completely healed, the scar is dense, thick, and inelastic, and our experience during the past ten months goes to show that if such a scar be left untreated, a speedy relapse is to be expected. After treatment, however, for some weeks by the high-frequency current, the scar becomes white, thin, and elastic, so that, in the majority of cases, it is scarcely noticeable, and, during the short time which we have had for

observation, has not shown any tendency to a recrudescence of the disease. In cases, too, where lupus has attacked regions inaccessible to the lamps, as, for example, the mucous membranes of the nose and mouth, we have employed the high-frequency current by the introduction of glass electrodes into the nostrils and mouth, and have thus been able to treat the part by direct application, with marked benefit to the patient and without pain.



CASE II.—B. S.

Since the inauguration of the Electrical Department, sixty-five patients have been treated for lupus. In all save one, marked improvement has resulted, while ten have been dismissed cured after a course of treatment varying from three months to six months. In the one case in which no improvement took place, the disease was of long standing, leading to extensive necrosis of the nose, and particularly of the alæ and septum. The effect of the light on the ulcerated

edge of the alæ was to cause the granulations to become excessively fungoid, while the ulcerative process seemed to be hastened rather than retarded. In other two cases where the edges of the nostrils were attacked by lupus, a similar fungation of the granulations was observed, and treatment by the light was discontinued. In these two cases, the ulcerated edge was afterwards treated by the high-frequency



CASE III.—M. W.

current with resulting cure. It is difficult to see why such fungation of the granulations should occur in this situation, unless it be that the part cannot be rendered sufficiently anæmic by pressure to allow of the penetration of the violet and ultra-violet rays, which consequently act simply as a superficial irritant.

As descriptions of the apparatus used in the treatment of lupus have already appeared in most of the medical journals, I have simply mentioned the various instruments used in each case.

I take this opportunity of acknowledging my indebtedness to Dr. J. Campbell M'Clure for rendering me much valuable assistance in the work, also to the sister and nurses of the Electrical Department for their constant attention in carrying out the treatment.

Photographs of certain of the cases, with short clinical histories attached, are appended.



CASE III.—M. W.

CASE I.—J. K. had suffered from lupus of the face for seven years. The disease first began on the left side of the nose, and extended rapidly over the cheek. Since the appearance of the disease various forms of treatment had been resorted to, including cauterisation and general constitutional treatment, without apparent benefit. The part, however, was never scraped.

The light treatment was first begun on 7th December, 1901. The London Hospital lamp was used, with a current of .

10 amperes, and the time of exposure ten minutes. Six weeks later the current was increased to 12 amperes, and the time of exposure to fifteen minutes. The reaction to the light was always good, sometimes violent, and it was found necessary to discontinue the treatment for a few days from time to time. In one of these intervals treatment with a glass electrode, excited by the Tesla coil, was adopted, with marked benefit to the patient, and until four weeks of her dismissal the Finsen



CASE IV.—F. S.

light and Tesla coil were used alternately. The patient was dismissed healed on 26th June, 1902, the Tesla coil alone having been employed during the last four weeks of treatment.

CASE II.—B. S., *æt.* 28, had been the subject of lupus for some twelve years. The disease first attacked the throat, and two years later extended into the upper part of the nares. It

spread gradually down the nasal mucous membrane, and made its appearance externally four years ago.

The previous treatment in this case consisted of external applications and, for a short time, exposure to the *x*-rays. The parts were never scraped.

When the patient presented herself for treatment at the Western Infirmary, the nose externally was much swollen and reddened, but there was no ulceration of the skin surface, save



CASE IV.—F. S.

only at the anterior edges of the nostrils. Examination of the nasal mucous membrane, however, showed it to be actively ulcerated, particularly where each ala met the skin septum, while the cartilaginous septum was almost entirely absent.

The light treatment of the external surface of the nose was begun on 5th December, 1901. The London Hospital lamp was used with a current of 10 amperes, and the time of exposure was ten minutes. On 24th January the current was

increased to 12 amperes, and the exposure to fifteen minutes. The reaction was at first very sluggish, and was not satisfactory until the amperage was increased. On 10th March, treatment of the nasal mucous membrane by electrical currents of high frequency was begun. A specially made glass electrode was introduced into the nostril, the time of treatment being five minutes at a sitting. This form of treatment was continued till 14th May, when she was dismissed cured. The light



CASE V.—Mrs. B.

treatment had been stopped on 25th March, as by that time all redness and swelling had disappeared from the nose. On dismissal, the ulceration of the nasal mucous membrane was found to have healed completely, and thickening of the nares had almost entirely disappeared.

As a means to correct the great deformity of the nose resulting from cicatricial contraction which existed when the patient first came under observation, small vulcanite tubes

were introduced into the nostrils, and worn constantly, except during treatment, with considerable benefit.

CASE III.—M. W., æt. 23, had suffered from lupus of the bridge and left side of the nose for six years. The disease began on the left side of the nose near the inner canthus of the eye, and spread slowly across the bridge of the nose and downwards towards the cheek. Scraping and cauterisation were



CASE V.—Mrs. B.

resorted to on two occasions, but without any improvement resulting. In connection with the onset of her attack of lupus of the face, it is to be noted that two years previously she suffered from a suppurative lachrymal condition in the left eye, which was for many months under treatment. The canaliculus is seen to be slit. In addition, still a year earlier, patient had an abscess in the neighbourhood of the knee, which, after being opened, did not heal for some six months. About the

time of the appearance of the lupus on the face, patient noticed that her voice was becoming husky, and in October, 1901, it was discovered that she was the subject of lupus of the larynx.

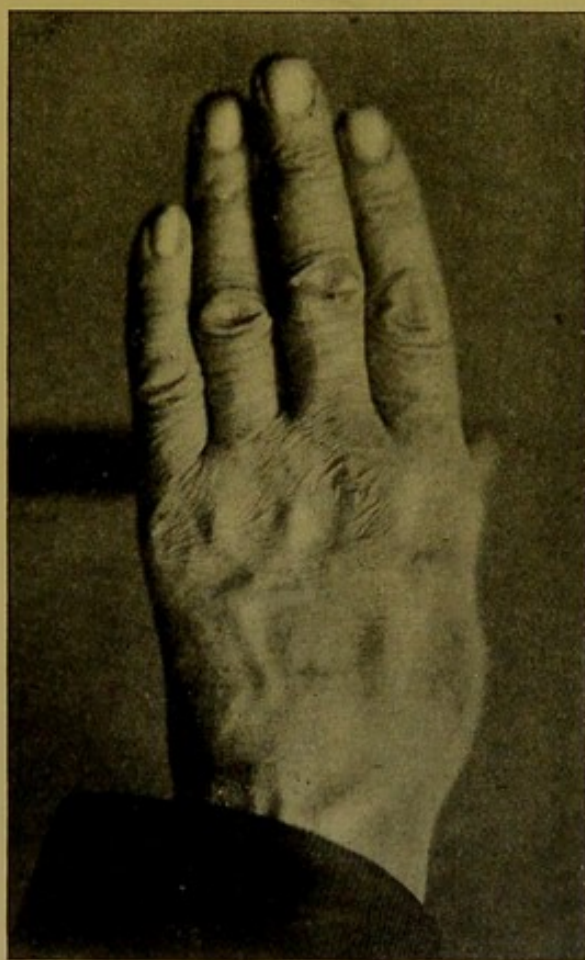
Treatment by the London Hospital lamp was begun on December, 1901, the current used being of 10 amperes, and the time of exposure ten minutes. On 17th January, 1902, the current was increased to 12 amperes, and the time of



CASE VI.—Mrs. C.

exposure to fifteen minutes. The reaction was almost invariably good. On 5th March, treatment by the high-frequency current, applied by means of a glass electrode, was instituted, and until 1st April was alternated with the lamp. During the remainder of the time she was under treatment the lamp alone was employed. While the patient made rapid progress during the first two months of treatment, the progress latterly was very slow, but she was ultimately dismissed completely cured on 6th June, 1902.

CASE IV.—F. S. had suffered from lupus of the nose for seven years. The disease began at the edge of the right nostril, and about a month after its first appearance she was treated by the application of ointments. As the disease tended to spread, she consulted a surgeon four months later, who scraped the part. After scraping it healed completely, and remained healed for a year. At the end of that time the disease again made its appearance in the same locality, and



CASE VI.—Mrs. C.

the part was once more scraped and cauterised, with the result that it again healed for a short time. It soon broke down again, however, but the patient did not immediately consult a surgeon. It was not until some eighteen months before admission to the Western Infirmary that she again saw a surgeon, when the disease had involved both alæ and septum. The part was at this time scraped and cauterised, and treatment by caustics was continued regularly every two or three

weeks for upwards of a year. Patient was admitted to the Western Infirmary some ten days before electrical treatment was commenced, and on 11th and 12th December, 1901, she was injected with tuberculin, when a marked local reaction with slight rise in temperature followed the injection of $\frac{1}{2}$ c.c. of tuberculin in a 1 in 1,000 dilution.

Treatment by the London Hospital lamp was begun on 17th December, 1901, with an exposure of ten minutes to a

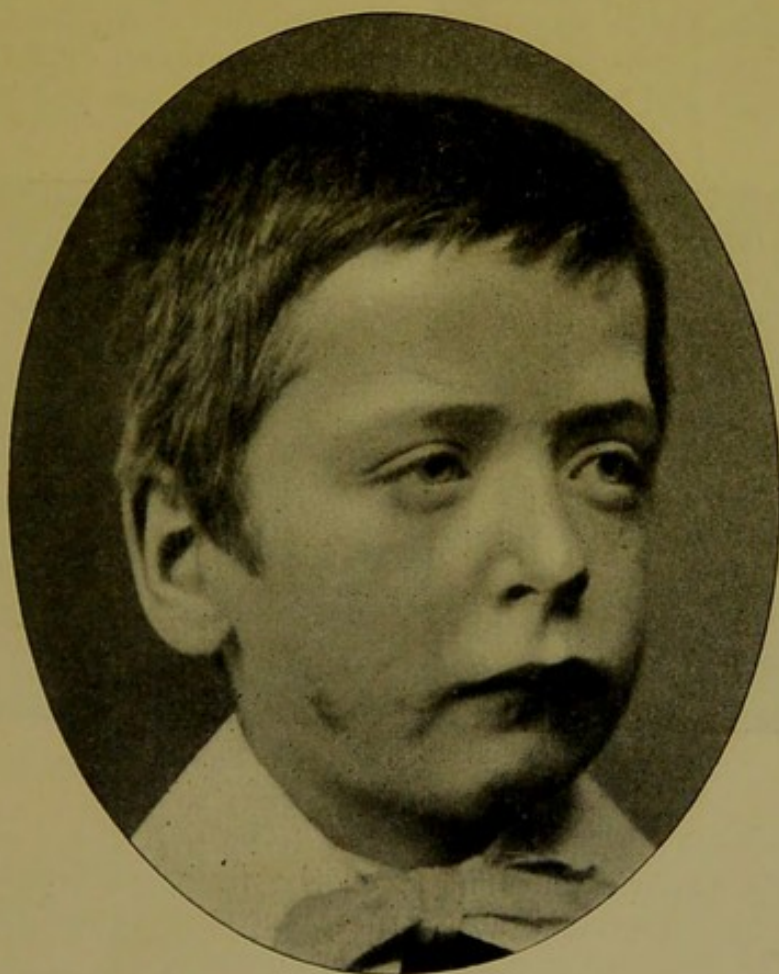


CASE VII.—S. S.

current of 10 amperes. On 28th December the patient was seized with an acute inflammatory condition of the face, with severe febrile disturbance, which lasted for a week, at the end of which the lupus was markedly improved. The light treatment was discontinued during this attack, but was resumed on 15th January, 1902, and on 27th January the current was increased to 12 amperes and the time of exposure

to fifteen minutes. Between 5th March and 1st April the light was alternated with the electrical discharge from the Tesla coil. Since 1st April the light alone has been used. The patient is still under treatment (16th October), but the condition is markedly improved.

CASE V.—Mrs. B., æt. 45, had suffered from lupus of the nose and upper lip for upwards of a year.



CASE VII.—S. S.

The disease began on the right side of the nose, and spread rapidly, involving the skin-septum and upper lip. The condition was at first untreated, but about two months before treatment was begun at the Western Infirmary she went to another institution, where she was treated by exposure to the *x*-rays. Patient states that there was no appreciable improvement in her condition under this form of treatment,

which was continued until within a few days of her coming to the Western Infirmary.

Light treatment was begun on 6th February, 1902, with an exposure of fifteen minutes to a current of 12 amperes. This was continued daily without intermission until 16th April, when she was dismissed cured. Treatment by the London Hospital lamp alone was employed in this case.

CASE VI.—Mrs. C., æt. 55, had been the subject of lupoid disease of the skin of the left hand for upwards of two years. The disease made its appearance first of all on the back and sides of the little finger, and gradually spread over the back of the hand and wrist. The hand was at times painful. She



CASE VIII.—C. B.

had been under treatment since the first appearance of the disease by ointments and general constitutional treatment. The parts were never scraped or cauterised.

The light treatment was commenced on 11th December, the London Hospital lamp being used, with an exposure of ten minutes to a current of 10 amperes. On 16th January the current was increased to 12 amperes, and the time of exposure to fifteen minutes. On 13th August treatment by the Bartholomew lamp was begun, and has been continued up to the present date. The patches of diseased skin were taken in turn, beginning at their margins, and working towards the centre as the margins healed. The high-frequency current has not been used in this case. The reaction obtained was

always good, though never violent. The parts are now completely healed, save for a small area on the thumb.

CASE VII.—S. S., æt. 7. About eighteen months prior to his beginning treatment in the electrical department, patient received a kick on the face, which caused an abrasion on the left side of the nose. A scab formed, which he scratched, and an eruption appeared round the seat of the injury. Under treatment at home this improved, and partially healed, but broke out on the nose shortly afterwards. Three months later it spread to the cheek. On 18th September, 1901, patient was admitted to the Western Infirmary, and the ulcerated patches were treated by the application of the acid.



CASE VIII.—C. B.

nitrate of mercury until 12th October, when a rubber bandage was applied to the face, and worn until the light treatment was begun. Tuberculin was not used.

Treatment by the London Hospital lamp was begun on 11th February, 1902, with an exposure of ten minutes to a current of 10 amperes. Treatment was continued until 1st May, when patient was sent home for a time. The reaction was always good, and occasionally severe, necessitating reduction in time of exposure to five minutes.

Patient returned on 30th May quite well, save for a small point on the nose, which reacted slightly after an exposure of ten minutes to a current of 10 amperes. As patient's general condition was not very good, he was sent away, to return in the autumn.

In August patient was brought to the Infirmary manifestly ill, and was removed to the Fever Hospital suffering from enteric fever.

CASE VIII.—C. B., æt. 17, had been the subject of a lupoid condition on the fore-arm of seven years' duration.

Seven years ago patient had an abscess on the lower third of the fore-arm, which was opened, and healed completely. Shortly afterwards a crust appeared on the scar, which reappeared after removal. This has since spread round the margin of the scar in spite of treatment by ointments and attention to general health. The part was never scraped or cauterised.

Treatment by the London Hospital lamp was begun on 4th June, 1902, with an exposure of ten minutes to a current of 10 amperes. As the reaction was very slight, the current was increased four days later to 12 amperes, after which the reaction was satisfactory. The treatment has been carried on without intermission until the present date, and marked improvement has resulted, as may be seen in the photograph.

