Notes on the carbolic treatment of leprosy / by J.M. Fleming, M.D.

NOTES

ON THE

CARBOLIC TREATMENT

OF

LEPROSY.

BY

J. M. FLEMING, M.D.,

Surgeon, Bengal Army, Civil Surgeon, Nimàr.

[*Reprinted from the Indian Medical Gazette, with some additional cases and remarks.*]

1871.

His entire skin is thickened and quite insensible. His ankles and feet very much swollen, perfectly black, and covered with bullœ; toes beginning to ulcerate; nose flattened.

24*th March*.—For the past week has been taking Liq. arsenicalis. State as on admission.

Liq. arsenicalis to be discontinued, and to have

Acid Carbolic	...	... ʒi
Ol. Lini	...	... ʒii

applied freely over all parts of his body night and morning.

4*th April*.—Bullœ have now entirely disappeared; the swelling of his feet and ankles is very much reduced, and the *blackness* has entirely given way to the *natural brown* of his skin. Complains only of *anæsthesia*, which seems to be complete over his whole body.

9*th April*.—A small bulla forming over outer right ankle.

13*th April*.—Bulla burst, giving exit to a little yellowish fluid.

15*th April*.—A fair amount of sensibility in skin, except below the elbows and knees. In every way very much improved.

19*th April*.—Left Hospital without leave two days ago, and has not returned.

Thus in about three weeks, a very marked improvement had taken place, and sensibility had returned to a considerable part of the surface.

II.—A second case came under treatment on 24th May, 1869, but did not remain sufficiently long in Hospital to admit of any marked improvement.

III.—*Múnda*, æt. 35, Kumhár.

1*st March*, 1870.—Came to Hospital this morning, stating that he had suffered from leprosy (*Rakka-pití*) for many

years, and had, on account of it, been discharged from his regiment about 4½ years ago.

Entire body covered with large, elevated, tubercular patches of a dark, almost black, colour; face very much swollen; fingers and toes swollen, stiff and bent; has not the power of straightening them; complains of constant running of water from his eyes, and of aching in limbs. Entire surface almost devoid of sensibility. In a very emaciated condition, and complains of loss of appetite and general malaise. Bowels confined.

To have *kalá dáná* ʒi at once, and carbolic acid ʒi, sweet oil ʒii, to be rubbed over entire body night and morning.

6*th March.*—Skin looks brighter; is able slightly to move his fingers.

15*th March.*—Patches seem reduced in size, and of a lighter colour than formerly. Complains of a pricking sensation all over his body which is so severe at night as to prevent sleep. General health and mobility of fingers much improved. Appetite much better. Wishes increased diet.

To continue carbolic acid and oil, and to have opium, gr.i. at bed-time. Mutton diet.

26*th March.*—Is now free from the pricking sensation.

Opium to be discontinued.

1*st April.*—Much better. Can now move his fingers *well*, and has no pricking of skin. Soles of feet tender and chapped, and nails of great toes black and loose.

Simple ointment to be applied to feet, and carbolic acid and oil continued.

5*th April.*—Looks better, but complains of some pain in his joints.

To have tinct. opii ♏xx. at bed-time, and continue applications.

11*th April.*—To wash his body thoroughly with soap and water every morning before applying the oil.

15*th April.*—Improving; water from eyes stopped.

26*th April.*—Every way much improved. Omit tinct. opii.

6*th May.*—Eruption has almost disappeared. Is quite fat, and expresses himself as *perfectly well.* The only signs of the disease are now a slightly swelling of the toes and fingers and bridge of the nose, and imperfect sensibility of the extremities. Nails of great toes have come off, and new, healthy ones are growing.

22*nd June.*—Has now perfect sensibility as far as the knees and elbows, but not beyond. All appearances of leprosy are completely gone, with the exception of some swelling of the toes and fingers, and of the bridge of the nose, and a slight eruption on the upper lip.

To continue applications.

18*th July.*—Has been shewn to several persons who can detect no signs of leprosy about him. There is still, however, slight swelling of toes and fingers and a little discolouration of bridge of nose, and he has a tingling sensation in his hands when he claps them briskly.

1*st August.*—In every respect quite well, and is anxious to return to his regiment. Has not applied the carbolic acid since 26th July.

His skin is now of a bright bronzed colour and perfectly free from eruption of any kind; all tenderness and swelling of toes and fingers are gone, and he appears to have perfect sensibility over the whole surface of his body and limbs. Healthy nails have grown on his toes.

6*th August*, 1870.—Discharged quite well.

Duration of Treatment.—Five months.

IV.—*Abraham Isájí*, æt. 50, Jew; came from Bombay for treatment, having heard of the preceding case.

4*th June*, 1870.—States that he has been suffering from leprosy for one year, and that his friends have excluded him

from his house, and obliged him to live in a hut by himself. Has tried various remedies, European (administered by a native doctor) and native, without benefit.

Present condition.—A thin, emaciated man, of a sallow complexion, and stone deaf (has to be communicated with by writing). There is a ring of *rose-coloured raised spots* round his right nipple, another similar ring *above* the left nipple; and a number of *raised spots* on his chest and shoulders. His eyebrows are very much swollen, giving him a peculiar frowning (*leonine*) appearance [Leontiasis, *Dá-ul-Asad;*] there are numerous *raised tubercular spots* on his forehead and cheeks; another patch on back of neck, very much raised; a number of smaller ones on back and loins; and a few on front of legs.

Altogether a very marked sample of the first stage of *true leprosy.*

Treatment.—To have his body thoroughly washed daily with soap and warm water, and to apply, night and morning, a mixture of carbolic acid ʒi, oil ʒvij.

8*th June.*—A very marked improvement has taken place: the raised spots round the right nipple are now represented only by a *slight rosy colour* of the skin, all *swelling* having completely disappeared; the swelling of his forehead is also considerably less.

22*nd June.*—The spots on breast have now all but disappeared; those on forehead are much reduced in size, and are assuming a dull colour; there is also a considerable, though not so marked, improvement in the raised spots on the back of the neck.

18*th July.*—One of the spots above left nipple, and another on left shoulder, which assumed a black colour a few days ago, have become abraded; the large raised spots on the back of the neck are now of a deep black colour, and those on the eye-brows are ash-grey. Most of the smaller spots

20*th August*, 1870.—States that he has been suffering from leprosy for about two years.

Present condition.—Whole of chest and abdomen covered with circular, red, raised spots; a considerable number also on back, neck, arms and knees, across bridge of nose and under eyes. Ears swollen and lobulated. General insensibility of surface. Bowels constipated.

Treatment.—As in former cases.

2*nd September.*—Considerable improvement. The patches are becoming smaller, and the healthy skin between them is extending.

To continue *external* application of carbolic acid and oil, and have, in addition,

Carbolic Acid	..	...	♏i
Glycerine	...	...	... ʒii

internally three times a day.

10*th September.*—Very much improved. The patches are smaller and becoming darker in colour, they are now nearly level with the skin. States that sensibility is returning to his body.

Carbolic acid increased to ♏ii, three times a day.

25*th September.*—Improvement continues. The larger patches on the chest and back are breaking up into groups of smaller ones. Slight symptoms of dysentery. Discontinue carbolic acid internally.

1*st October.*—Carbolic acid resumed in doses of ♏iii, three times a day.

28*th October.*—Increased to ♏iv.

14*th November.*—Face quite clear of patches. Those on body very small and rapidly fading.

30*th November.*—All but well; all symptoms of the disease have disappeared from his face, ears, neck, arms and legs,

and only a few slightly discoloured spots remain on his chest.

12*th December*.—Released from jail.

18*th December*.—Came to dispensary and stated that his friends were highly delighted to see the improvement in his condition. Was advised to continue the external application of the carbolic acid for some time, and took a supply with him as he was leaving the place.

VII.—*Miriam*, Jewess, æt. 22.—Has suffered from leprosy for five years. Her husband has made her live by herself for nearly two years. Has had two children—a boy, aged 7 years, and a girl, aged 20 months. The latter is with her and is still being nursed; she is a weak puny child, but shews no signs of leprosy.

5*th September*, 1870.—*Present condition*.—Feet very much swollen and ulcerated; edges of the ulcer of a bright red colour. States that small white pimples are continually forming, which after a time become red, and then ulcerate at the summit, and the ulcers shew no tendency to heal. Similar ulcers on the hands, but not so numerous. Skin of nose and chin and under eyes very much swollen, and covered with a papular eruption. Lobes of ears very much thickened and tuberculated.

Treatment.—As in former cases.

6*th September*.—To have carbolic acid ♏i, glycerine ʒij, *internally*, three times a day, and to continue the *external* application.

10*th September*.—Carbolic acid increased to ♏ij, three times a day.

23*rd September*.—Left leg swollen and painful. To discontinue application of carbolic acid and oil, and apply fomentations.

1*st October*.—Swelling gone. To resume application of carbolic acid and oil, and have ♏iij *internally*.

15*th October*.—Very much improved in all respects. Face is almost free from eruption, and ulcers on feet and hands are rapidly healing.

22*nd October*.—Carbolic acid increased to ℿiv, three times a day.

30*th November*.—General appearance very much improved, but complains of some griping and looseness of bowels. Carbolic acid to be discontinued *internally*, but continued *externally*.

15*th December*.—Dysenteric symptoms quite gone. Considers herself in every way very much improved.

1*st January*, 1871.—Only a few very small spots remain on face, the lobulated appearance of the ears is nearly gone, and the ulcers on the feet and hands are quite healed, leaving only a few slightly elevated cicatrices.

31*st January*.—Made an out-door patient. All that now remains of the disease is a slight swelling, and discolouration of the hands and feet. In other respects quite well.

Continued to attend for a short time as an out-door patient, and then left for her home in Bombay.

Additional Cases and Remarks.

Since the above was published, eight additional cases have come under treatment, two of which have been conducted to a successful termination, *viz.*:—

VIII.—*Nàdir Shàh*, Afghàn, æt. 22.

18*th November*, 1870.—Applied at the Khandwa Dispensary for treatment. States that his father died from leprosy, and that he has suffered from it from childhood.

Present condition.—A thin, emaciated man. Walks with a slouching gait, with his body bent to right side, and cheek resting on left shoulder. Features pinched; almost entire body covered with *dark papular eruption*; fingers ulcerated and crooked, cannot straighten them. Large sores on both

legs; toes severely ulcerated, so that he can hardly walk; goes about leaning on a stick. Eruption very marked under both eyes, and the skin under left eye so much puckered and contracted as to cause complete eversion of lower lid. No whiskers or beard. Eye-brows and eye-lashes completely gone, and eyes red and ferretty. Tongue very much thickened, and covered with papular eruption. Palate covered with a similar eruption, and perforated by a hole large enough to admit the point of the little finger. Voice so harsh and nasal, that it is difficult to understand what he says.

To be placed under carbolic acid treatment.

After attending for a few days, he left Khandwa, and, shortly afterwards, made his appearance at the Burhànpùr Branch Dispensary, where the treatment was continued by the Sub-Assistant Surgeon.

20*th March*, 1871.—Returned to Khandwa. Eruption has now all but disappeared from his body and limbs, but continues slightly on his hands, so that he can only partially straighten his fingers. There is also a large and deep ulcer on lower surface of left great toe. Face very much improved, and eversion of eyelid considerably less. Mouth and palate as on first admission.

Carbolic acid treatment to be steadily continued.

23*rd March*.—

℞ Carbolic Acid ... ... ℥i
Glycerine ... ... ℥i

To be applied night and morning with a small piece of sponge to his tongue and palate.

28*th March*.—A patch on left side of chest, another on back of left shoulder, and a third on left thigh, have become black.

3*rd April*.—Healthy granulation has been set up in the palate, and the opening is now nearly closed. Eruption has

disappeared from the tongue, except a little along the centre and at the tip. Voice much clearer. Eversion of eyelid considerably less. Feet quite well. Hands well, except right fore-finger, which is still superficially ulcerated and crooked. Cuticle has peeled off blackened patches, leaving a healthy surface.

10*th April.*—Right wrist has been pretty severely blistered owing to his sitting in the sun after applying the carbolic acid and oil. The skin is now peeling off and leaving a quite healthy surface. He bears himself much more erect, and his voice is almost natural. Fissure in palate seems quite closed.

13*th May.*—Body quite free of eruption. Face looks clear, with the exception of a slight eruption under the eyes and across the point of the nose. Eye-lashes are growing. A slight appearance of hair on eyebrows. Mouth almost well, only a slight redness along mesial line of palate and at back of tongue.

11*th June.*—Eyebrows and whiskers evidently growing.

9*th August.*—Left on a pilgrimage to Mecca. Quite free of all signs of the disease, with the exception of a slight swelling and discolouration under the eyes. Hair on face growing rapidly. Has quite recovered his bodily powers, and has been able to dispense with his stick for the last three months.

IX.—*Bachù Àyà Ràj*, æt. 35, 16*th April*, 1871.—Came from Nandora for treatment. Whole body covered with large irregular patches of a tuberculated character; cheeks and nose swollen and covered with similar patches; ears swollen and lobulated; fingers of both hands much swollen and bent; toes also swollen, and nails of three outer toes of each foot have fallen off.

Says that he suffered a great deal from primary and secondary syphilis, and received treatment from native

hakíms. While suffering from secondary syphilis, the *leprous* patches began to appear on his body and face. He then got free from the syphilis, but the leprosy steadily increased. Has been treated for it by native *hakíms*, but without benefit. The disease first appeared about six years ago.

To be placed under carbolic acid treatment.

25*th April*.—Can straighten his fingers considerably. To continue application of carbolic acid and oil, and take internally Infus. Chirettæ ʒi, Acid Nitro-hydrochlor. dil. ♏x, three times a day.

30*th April*.—Swelling of face much less. Eruption on body breaking up into small patches. Skin looks much clearer. Swelling of fingers reduced, can very nearly straighten them. General health much improved.

7*th May*.—Considers himself much better. The smaller patches on chest and abdomen have disappeared, and his face is much clearer.

22*nd May*.—Swelling of face almost gone. Legs nearly free from eruption, and skin, which was formerly harsh and rough, feels quite soft and smooth.

29*th May*.—Sensation returning to his limbs. Can straighten all his fingers, except two on each hand.

3*rd June*.—Has a very fair use of all his fingers. Eruption on back almost gone. To continue tonic, but omit carbolic acid and oil, and apply instead

Glycerine	...	... ʒss.
Water	...	... ʒiss.
Carbolic Acid	...	... ʒi.

4*th June*.—States that the new liniment, though containing the same proportion of carbolic acid as the former, causes considerably more smarting, which is, however, not so severe as to necessitate a reduction of the strength.

16*th June.*—Only a few black spots now remain on legs. Swelling on face very slight.

27*th June.*—All signs of leprosy gone, except a little puffy swelling below the eyes.

To continue remedies as a precautionary measure.

19*th July.—Discharged, quite well.*

In a third case, that of a boy suffering from *white* leprosy, (*Baras* or *Korh*) encouraging results were also obtained, although the patient did not remain sufficiently long under treatment to allow of a perfect cure being effected. The particulars were as follows :—

X.—*Kabir*, Mussulman, æt. 14.

19*th June*, 1871.—Came to hospital this morning. Says that he has had some small white spots on his legs since he was a child, and that they have continued to spread slowly but steadily.

Present condition.—On left leg, a long white depressed scar almost surrounding the ankle, and a number of small irregular white spots running up from this nearly to the knee; on right leg, a similar line of small white spots; on left side of loins, a circular white patch about an inch and a half in diameter, and on right side, two similar, but smaller patches. All these spots, when closely examined, are found to be surrounded by a dark zone, about an inch in width, on which the skin is slightly rough, and apparently studded with minute tubercles: the appearance being very much the same as that of the incipient stage of black leprosy, only that the skin is not so much thickened or so distinctly tuberculated. The white spots seem to be the cicatrices left by the spreading of this dark circle. The skin on them is of a pure pearly white, and quite smooth, apparently differing from the healthy skin merely in colour.

Treatment.—As in the former cases.

27*th June.*—The zone round the white spots is now of an *intensely black* colour. The white patches have assumed a rosy tint, and the natural brown of the skin *seems* to be encroaching on them.

29*th July.*—The whole of the spots of a more or less red and brown colour, and much reduced in size, *natural colour spreading rapidly from the edges.* The cuticle has peeled in small dry flakes off the blackened parts, leaving an apparently healthy surface.

1*st August.*—Left Khandwa as his family was leaving the district.

REMARKS.

A few remarks on the action of carbolic acid in this disease may not be inappropriate, and *first*, as to the *blackening of the skin* under its use. The normal action of carbolic acid on the animal tissues, whether healthy or diseased, is, as is well known, to *whiten* them, but its effect on the skin of a leper is, as will be seen, quite the reverse. There is, therefore, clearly some foreign substance present, of a nature essentially different from the ordinary animal tissues. What is this?

Now, it is noteworthy that, while *animal tissues* are whitened by carbolic acid, the *lower cryptogamic vegetables* are invariably *blackened.* May we not here have an explanation of the proximate cause of the disease? namely, the presence of a slowly-spreading fungus which, like a blight, gradually destroys the vitality of the parts over which it extends, depriving them first of sensibility, and then of life; and, as a secondary effect, producing that derangement of the general health which invariably attends advanced cases.

This, of course, is offered merely as a hypothesis which further observation may establish or disprove. It seems,

however, to explain the principal features of the malady, and also the probable *modus operandi* of the carbolic acid in removing the diseased condition, and ultimately the cachexia and other secondary symptoms resulting from it.

Secondly, of the strength of the carbolic liniment that may be employed. In some of the first cases, it was applied in the proportion of 1:8, and occasionally some of the worst spots were touched with the pure acid. Latterly, it was found more convenient to employ it in a more dilute form 1:16 (ʒi to ʒij). The particular diluent employed does not seem of much consequence. The most generally useful is tilli oil, but any other bland oil would, of course, be equally applicable, and glycerine and water, (as employed in case IX) produces a more elegant and very useful liniment.

In the more advanced cases of the disease, some care is required in not pushing the application too far, as otherwise considerable excoriation of the cuticle is apt to take place, while, from the general insensibility of the surface, the patient is unable to give warning when this is likely to occur. Cases IV and VIII give examples of this. In both of these, however, on leaving off the application for a few days, and anointing the parts with sweet oil or simple cerate, the lost cuticle was soon replaced, and but little inconvenience resulted.

KHANDWA, C. P.
October, 1871.

FRED. LEWIS, Calcutta Central Press Company, Limited.