Quite recently I have employed in the treatment of a large number of cases the liquid acid nitrate of mercury and believe to have found in this application a remedy of the selective caustic type which far surpasses any other method of treating lupus in its efficacy and in its rapidity of action.

The liquid acid nitrate of mercury has been for long known as a potent remedy for certain tertiary syphilitic sores and fungating syphilitic granulomata, but it seems never to have been widely used in the treatment of lupus. Most of the textbooks mention this caustic in a perfunctory manner or "damn with faint praise." In the medical journals I have been able to discover only two definite statements as to its real value in lupus. In the *Medical Times and Gazette*, 1855, vol. i, p. 9, is the following account:

A solution of the nitrate of mercury in strong nitric acid is in very common use at the Hospital for Cutaneous Diseases, and constitutes a very convenient form of caustic. Its formula is—

R Hydrargyri
Acid. nitrici (sp. gr. 1.50) ... 3j
Solve. ... 3ij

The solution produced is a clear, colourless fluid.

Its usefulness and methods of employment in carbuncle, in acne, in boils, in lupus, for sloughing ulcers, and in moles, naevi, etc., is then related in detail.

"In Lupus.—The acid nitrate is one of the most efficient and convenient forms of caustic in this disease. Mr. Starlin does not, however, employ it solely, but uses also the biniodide of mercury and a paste of which arsenic is the principal ingredient. (See page 11, for July 1.) The acid nitrate is chiefly used in indolent tubercles, and to indurated patches not actually ulcerated. After ulceration has occurred the arsenical paste is preferred."

The second reference is to be found in the *British Journal of Dermatology*, vol. viii, 1896, p. 44, and is as follows:

"Mr. Marmaduke Sheild showed a case of lupus vulgaris of the nose treated by acid nitrate of mercury. The patient was a delicate-looking woman, aged 27. She had suffered from lupus vulgaris of the nose for over four years, and had undergone so many scapings 'that she could not remember them.' The pure acid nitrate of mercury was applied on six occasions, the parts being previously well soaked with 20 per cent. cocaine. The parts affected were the tip and alae of the nose, the septum, and a portion of the lip. The parts had now soundly healed over, and no trace of lupoid tissue could be seen. It was intended to keep the case under observation, and apply the same remedy to any recurrent nodules of the disease that might present; so far as one could judge a definite cure seemed likely to result."

My own experience of the treatment of lupus with acid nitrate of mercury covers only a period of some nine months, but the results obtained have been so successful that one wonders why this already known remedy should have remained neglected.

The cases which have been treated by this method in the skin department at St. Bartholomew's Hospital may be arranged in four classes:

1. Single patches of non-ulcerated lupus of the size of a shilling to that of half a crown, and which have received no previous treatment.
2. Old cases of lupus which have been treated by other methods, but in which lupus nodules still remain in the scars.
3. Ulcerated lupus, often of large extent and with much surrounding inflammatory infiltration.
4. The common type of lupus of the nose, involving frequently also the nasal septum, the palate, the upper lip, the cheek, and sometimes the lacrymal sac and skin over and around, a type very difficult to deal with by Finsen light or by scraping.

The liquid acid nitrate of mercury is applied by means of a small swab of wool tightly twisted round the ends of a finely pointed pair of forceps. It is painted on to the affected areas freely and with firm pressure for one to two minutes, taking care to limit the application exactly to the lupus patches, to isolated nodules, or to ulcerated surfaces. In the case of isolated nodules or non-ulcerated lupus patches the effect of the application is after a minute or so to change the semi-translucent reddish-brown "apple jelly" lupus tissue, so that it takes a dry yellowish-white opaque appearance. No dressing is applied and the patient is seen again in a week. The yellowish-white opaque appearance has then given place to a thin brownish crust, which falls in a few days and leaves the affected area sometimes completely healed,

sometimes as a shallow ulcer which heals in a few days. In many instances a single application has been sufficient to replace the lupus by a smooth healthy scar without any remaining lupus nodules. In other cases isolated nodules have remained in the scar and it has been necessary to repeat the application one or more times. The application is only slightly painful at the time, but is followed by more severe pain for several hours.

In the case of ulcerated lupus, after removing all crusts, the solution is freely painted on to the ulcerated surface. This causes considerable pain, but if a not too large area be done at one sitting it is easily borne by most patients. The after-effect upon ulcerated surfaces is rather different from that upon non-ulcerated lupus. The surface of the ulcer becomes dry yellowish-white, but in a few days much serous exudation gives rise to a thick heaping up of crust. At the end of a week the crusts are picked off, or bathed off, and there is then an ulceration with purulent surface, and a margin of pink healthy epidermis which heals in the course of a week or so. The number of applications required in an ulcerated lupus depends upon the extent of the disease and the depth of the inflammatory infiltration which often accompanies these ulcerations.

In those cases where the nose is involved the treatment by Finsen light or scraping is rendered difficult owing to the deep involvement of tissues other than the skin. The disease, which usually starts in the mucous membrane of the anterior part of the septum and spreads hence through the whole thickness of the nose to appear as nodules in the skin of the nose, sometimes also perforates or destroys the cartilaginous septum, spreads upwards to involve the lacrymal sac, downwards to the upper lip, backwards to the hard and soft palates, and along the lymphatics to appear upon the skin of the cheek midway between the nose and the ear. But even in these difficult cases where much of the disease would seem to be out of the reach of a local caustic application, the liquid acid nitrate of mercury has produced far more rapid improvement than any previously adopted method of treatment. A lacrymal abscess may be swabbed with the solution. The solution may be carefully painted on to lesions in the nose or on mucous membranes, and all nodules or ulcerations on the skin surface similarly dealt with. In extensive cases all this may be done at one "sitting" under a general anaesthetic; but it can also be carried out gradually without any anaesthetic by applying the acid little by little to different parts at different visits. No complete cure can as yet be claimed in an extensive case of lupus. The period of employment of this remedy has not yet been sufficiently long. But the good results already obtained seem to justify a more general use of the acid nitrate of mercury in the treatment of lupus.

HEALING OF A TROPIC ULCER OF THE GREAT TOE IN AN AGED GLYCOSURIC PATIENT.

BY

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THE complete healing and treatment of a large trophic ulcer under circumstances so adverse appear to be worth recording.

The patient, an old lady aged 82, has the following remarkable family history: Her mother died aged 86, and her father aged 75; four brothers lived to 86, and one to 84; one sister lived to 89, one to 86, one to 85, and two to 84.

She was first seen by me in March, 1919, when she was suffering from bronchitis and a failing heart. She stated that she had suffered from diabetes for twenty years; that when this was first discovered she was strictly dieted, and that the diet had been gradually relaxed, she having kept fairly free from symptoms for some years. She did not take any sugar and very little starchy food. She had been more or less blind, due to double cataract, for fifteen years. She was physically very feeble, and had a good deal of adipose tissue; her muscles were very flabby, as was also her heart, and there was a good deal of bronchitis. Mentally she was remarkably bright and vigorous. The urine contained a considerable amount of sugar; she was passing 100 to 125 grams a day; there was no acetone nor diacetic acid present. With rest in bed, expectorants, and cardiac stimulants the bronchitis cleared up, her heart became stronger, and she was able to get up at the end of a month and

remain up for several hours a day. Her diet was fairly varied, but sugar and very starchy foods were forbidden. She took a drachm and a half of sodium bicarbonate every day. The amount of sugar in the urine dropped to 24 grams a day.

During the summer and autumn of 1919 she kept fairly well, and was able to get about the house and garden, but at times complained of pain in her legs due to peripheral neuritis.

In December the pains became more severe, and she had increasing difficulty in walking, and her general health was failing. About December 29th the pain became most severe in the right leg and foot, and there appeared a bulla 1 in. in diameter at the base of the right great toe on the outer side; there was no history of any injury; the bulla was full of dark sanious fluid; the cuticle gave way in a few hours, leaving a raw unhealthy surface. In two days there was a typical trophic ulcer surrounded by a zone of inflammatory oedema. The ulcer slowly increased in area and depth, and the inflammatory redness and oedema spread up to the middle of the dorsum of the foot. The urine contained from 125 to 150 grams of sugar a day; the prognosis was anything but hopeful.

She was kept in bed, and the carbohydrate intake was gradually reduced to a minimum, and fats were also limited; alkalis and *nux vomica* were prescribed. She complained much of pain in the toe and foot at night; for this she took one or two tablets of *oripon* $\frac{1}{2}$ gr. which gave her great relief. At the onset the whole of the foot was most thoroughly cleaned and painted all over with picric acid 24 gr. to 3j in methylated spirit, and was then powdered with boric acid powder; the ulcer was dressed with sterilized gauze, and pieces of gauze were kept between all the toes; the whole foot and leg were enveloped in gamgee and kept slightly raised.

The ulcer continued to increase; small ones appeared on the heel and between the second and third toes, but quickly healed. By the beginning of February the ulcer had spread round and involved the base of the second toe, covering in all an area of two square inches and extending almost to the bone and upwards in the interdigital space for a full inch. The patient's general health, however, had improved, and the urine only contained 20 grams of sugar a day.

From February 14th the whole foot was cleaned twice a day with methylated spirit, and the greatest care was taken in removing every particle of necrosed tissue from the ulcer, which was then freely swabbed with spirit and filled in with a paste of bismuth carbonate and liquid paraffin, which was removed and fresh used at each dressing.

After a month of this treatment the ulcer ceased to spread, and all the inflammatory reaction around had disappeared; at the end of six weeks slow healing commenced, and continued uninterruptedly until, by the middle of May, the site of the ulcer was completely covered by sound scar tissue and the whole foot was sound. The symptoms of neuritis were much less in evidence.

The patient is now (June 3rd) able to be up most of the day and walk from room to room and go out in the garden. She was fortunate in having a particularly efficient and painstaking nurse; this I think was more than half the battle.

A NOTE ON

A METHOD OF TREATING HAY FEVER AND PAROXYSMAL RHINORRHOEA.

BY

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DURING the past four years my attention has been concentrated on the treatment of hay fever, paroxysmal rhinorrhoea and allied conditions. The results which are being obtained at the present time lead me to believe that great relief can be given to the majority of patients.

The method employed, which so far as I am aware has not been used previously, consists essentially in treating the vestibule of the nose. The vestibule, that is to say, the in-turned skin of the nostrils, is carefully examined for any fissures or sore spots and a note made of their whereabouts; it is then rubbed with an astringent lotion, silver nitrate gr. xxx to the ounce being the solution I generally use. The rubbing is carried out thoroughly and systematically; particular attention is paid to two spots, the first is high up on the outer wall and the second is the floor about half to three-quarters of an inch back from the orifice. No part of the vestibule must be missed, and the nostril must be stretched to open up the folds. I make no application to the mucous membrane, I do not touch it if I can help it, but it is possible that some of the solution goes in further than I intend.

The results up to the present show that all cases of nasal rhinorrhoea treated by this method have been cured; that condition appears the easiest to treat.

Good results are obtained also with patients suffering

from hay fever. This year seven patients were treated about a month before the symptoms were due and have practically escaped. It is true there have been occasional slight "reminders," which, however, merely serve to show that they have not outgrown the complaint. All seven regard themselves as cured.

Some cases of asthma have also been treated, but the results have been less satisfactory, although some improvement has been obtained. In all cases of paroxysmal sneezing and asthma the external auditory meati should be inspected for impacted cerumen, dermatitis, etc. In what may be called extreme cases of hay fever I do not use the silver nitrate at first, but apply an anaesthetic solution to the vestibule and a wide area around.

R. Acidi carbolici	...	...	...	...	...	m iij
Olei menth. pip.	...	...	...	...	...	m vj
Sp. vini rect.	...	...	...	...	...	3 iv

Misce. Fiat pigmentum.

After a few minutes lotio calaminae (U.C.H.P.) should be applied to an even wider area of the face. I should like to draw attention to the manner in which the application of this anaesthetic solution to the nasal vestibule relieves the eye sensations in hay fever and clears up the occasional blurring of vision of which many people complain although they are not subject to hay fever. I believe that the efficacy of the treatment depends upon diminishing the abnormal sensitiveness of the skin.

If a normal person paint the vestibule with the silver nitrate solution he will not experience the slightest irritation nor will any reaction follow. If, on the other hand, the person is subject to one of the diseases mentioned above a reaction of varying intensity will follow. His eyes will water, he will sneeze a few or many times, and both nostrils will run copiously, a milky fluid coming away, and in some cases a cough and temporary feeling of tightness of the chest will occur. The reaction lasts from half an hour to twelve hours.

This convinces me that our aim in treatment must be to lessen the hyperaesthesia of the skin of the vestibule.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

MONILIAL GASTRITIS.

A RATHER anaemic woman, aged 42, had suffered for years from ulcer of the stomach, which about three months before seeing me was so bad that her doctor sent her to bed for a month on strict diet. Great relief followed, and soon after she was sent to the seaside for a month. Improvement was steady, and she was now on the way back, staying with relatives till fit for duty. Feeling uncomfortable the day before, she resumed strict diet and called on me. A simple alkaline mixture was prescribed, the diet approved, and rest advised during most of the day.

A few days later I was called in and found that, though only Benger's food was taken, about two hours after there was belching and vomiting of sour matter. Not much was made out by palpation except that there was little or no tenderness. The patient was thin. The mouth was in good order, and the bowels were regular. A little of the vomit taken for examination soon settled into an opalescent fluid with a flocculent sediment. Under the microscope a trace of sediment showed food debris with considerable numbers of yeast cells and moderate numbers of sarcinae and *B. geniculatus*. The last, being presumptive evidence of malignant disease, was quite unexpected, and its association with the other two suggested the transition stage. Even so, after months of careful diet and weeks in which the stomach was not obstructed, it was difficult to account for all this yeast. On getting it in pure culture the yeast proved to be a fermenter of maltose, but not of saccharose—practically conclusive evidence that it was the common thrush fungus in yeast form.¹ Further examination proved that it was *Monilia albicans*, and capable of producing thrush.

In approximately healthy mouths traces of thrush fungus are common enough, and are the sources of infection for sucklings, but mouth contamination could not

¹ BRITISH MEDICAL JOURNAL, 1913, ii, p. 1460.