the only direct evidence of intracranial suppuration. As to the treatment little need be said. The obvious indication is to evacuate the pus and to provide free drainage by operative means.

Subsequent note.—The patient made an excellent recovery from the operation and was quite well for a year after. I was then asked to see her again. She was suffering from slight earache and had an abscess of considerable size over the mastoid, raising up the linear scar of the old operation wound. There was but little discomfort referred to the ear itself and there was no perforation or discharge. I carefully cleaned the skin over the abscess and with due precautions withdrew a sample of the pus for bacteriological examination. It was reported to contain pneumococci. The abscess was opened and healed readily. I have reason to know that the patient remained in good health for about two years afterwards. Her medical history then showed the following interesting sequence of events occurring at intervals of a year: (1) an attack of pneumonia of moderate severity (September, 1900); (2) an attack of acute catarrh of the middle ear with extradural abscess having the clinical characters of a pneumococcal infection as detailed above (September, 1901); and (3) slight earache with large abscess over the mastoid of pneumococcal origin and evidently due to infection through the middle ear and antrum (October, 1902). Apart from the interest of the individual manifestations this history shows the remarkable tendency to recurrence of pneumococcal infection or perhaps more correctly the persistence of the infection in a latent form with periodical outbreaks.

Oldham.

NOTE ON MERCURIAL INJECTIONS IN NERVOUS DISEASES OF SYPHILITIC ORIGIN.¹

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(Translated for THE LANCET.)

PERSONS suffering from nervous diseases are very sensitive to certain methods of medical treatment and the generally accepted restrictions with respect to the use of mercurial remedies are specially applicable to such patients. I will here detail in a collective form some of these restrictions, the soundness of which has, in my estimation, been confirmed by prolonged observation of a large number of patients presenting nervous symptoms of syphilitic origin.

Injections of soluble salts (Note 1) given either every day or three times a week are the most recommendable form of treatment, for in this way the amounts administered can be determined with more precision than by other methods. Pills and other preparations to be swallowed often produce, even when taken in small quantities, intestinal troubles in nervous diseases. With inunction (*frictions*), grey oil, and injections of insoluble salts it cannot be exactly known how much of the remedy has been absorbed and in what space of time. This being so, the patient's general state may, when the limit of toleration has been exceeded, undergo a sudden and transient deterioration, leaving behind it a long-continued aggravation of the nervous troubles, the relief of which was hoped for. It is desirable to avoid routine practice and the giving of the same mercurial salt to all patients suffering from nervous diseases. In the selection of a method of treatment the medical man ought to be guided not by his preconceived ideas but by prolonged observation of the patient. Individual idiosyncrasies with respect to toleration ought to be ascertained. In general, the familiar preparations of benzoate, biniodide, and perchloride of mercury agree well when given in ordinary doses, while cacodylate, hermophenyl, and other organic compounds agree even better but seem to be less active in equivalent doses (Note 2) and may be reserved for delicate patients. By varying the nature as well as the doses of the salts administered remedies which cannot be tolerated continuously may be tolerated for a limited time (Note 3).

The therapeutic result is not proportionate to the quantity of mercury administered, some preparations being more active than others. Two facts may here be mentioned—

namely, (1) that patients who have not derived any benefit from a given preparation or from small doses have improved under the use of another preparation or of larger doses; and (2) that patients who have become worse when treated with a certain salt or with large doses have improved when a different salt or small doses were substituted (Note 4).

In the case of a young patient suffering from nervous disease whose general state is in other respects normal and in whom the lesion is recent and quite local (a gumma, for instance) mercurial treatment may be used with the same intensity as in any syphilitic manifestation whatever. With middle-aged patients not in very good condition and having disseminated lesions (such as disease of the cerebro-spinal vessels, tabes, and general paralysis) mercurial treatment ought to be commenced cautiously and watched with close attention. Moreover, the patient might have secondary infections of certain viscera, such as the bladder or intestines, associated with paralysis or atony of the organs in question. Though these conditions are of infective origin mercury has no remedial action on them and the temporary lowering of the general health which a too energetic mercurial treatment may bring about renders these infective processes more active. With elderly persons presenting nervous symptoms of syphilitic origin greater circumspection is required; the state of the kidneys must be carefully investigated by means of a complete analysis of the urine and observation of the renal efficiency.

The duration of the treatment and the doses employed will naturally depend on the effect produced, on the state of the patient, on the special object in view, and the like; they cannot be pre-arranged on a uniform system for all cases. These precautions, the greater part of which are to be found in the teaching of Fournier, are the best guarantee of therapeutic success. After having been for a long time employed in an inadequate manner for the relief of nervous symptoms of syphilitic origin mercurial treatment is at present often carried on more actively than is good for patients suffering from nervous diseases. It is desirable that these extremes should be avoided and that preparations and doses conforming to each individual's powers of resistance should be selected in order to insure the success of mercurial treatment in nervous diseases of syphilitic origin.

Note 1.—All our injections are intra-muscular. When this plan is adopted there is little or no induration and pain is of exceptional occurrence. The injection ought to be given very slowly and followed by gentle massage. The place for injection is the buttock and the average depth is four centimetres.

Note 2.—The equivalence of doses in the case of different salts is ascertained from the amount of mercury in each salt, assuming, of course, that the chemical valency of the mercury is the same in the groups which are compared. A centigramme of mercury per day is the average dose; there are patients who cannot take so much but many can take more than that.

Note 3.—Our series of injections of soluble salts vary from 6 to 20 administrations. The series is repeated after a pause of equal duration to make up a total of from 40 to 80 injections for a course of treatment to be spread over one or two years. With insoluble salts we have made weekly injections numbering from 6 to 12, and after an interval of some weeks another series is recommenced. There is no definite limit except the tolerance of the patient.

Note 4.—An intensive treatment is not necessarily a heroic treatment, for intensity may be obtained insidiously by very prolonged administration and the use of average doses frequently repeated. It is necessary to give the patient all the mercury that is required for the cure of the disease without giving him enough to produce toxic symptoms.

DIPHTHERIA IN BRADFORD.—Dr. W. Arnold Evans, medical officer of health of Bradford, in a report on the prevalence of diphtheria presented to the health committee of that city, states that the disease showed a gradual increase during the period from 1900 to 1903, followed by a remarkable rise in 1904. In 1903 there were 196 cases, with 52 deaths, while for the ten months up to the end of October, 1904, there have been 678 cases with 119 deaths. By far the larger number—namely, 517 cases out of the 678—occurred in children between three and 13 years of age. The children attending St. Stephen's schools in West Bowling have been especially liable to be attacked.

¹ A communication to the Seventh French Congress of Medicine, Oct. 24th to 27th, 1904.