acquisition of the bad habit of thinking out their affairs upon getting into bed.

ADJUVANTS.

In such cases especially, and in the cure of insomnia generally, people who find it difficult to get off to sleep have been advised to count monotonously, one, two, three, up to a thousand or more, until they fall asleep; to picture some familiar scene and keep the mind fixed upon it; to repeat the letters of the alphabet over and over again. The late Dr. Pereira gave some interesting illustrations of the well-known fact that the repetition of monotonous impressions on the senses of hearing, seeing, or touch are provocative of sleep. One passage from his monumental work on remedies I may quote to you. Speaking of monotonous impressions in the therapeutics of insomnia, he wrote: "This is the principle of the 'method of procuring sound and refreshing slumber at will' recommended by the late Mr. Gardner, who called himself the hypnotologist. His method was for some time kept secret, and was first made public by Dr. Binns. It is as follows: Let the patient 'turn on his right side, place his head comfortably on the pillow, so that it exactly occupies the angle a line drawn from the head to the shoulder would form, and then, slightly closing the lips, take rather a full inspiration, breathing as much as he possibly can through the nostrils. This, however, is not absolutely necessary, as some persons always breathe through their mouths during sleep, and rest as sound as those who do not. Having taken a full inspiration the lungs are then to be left to their own action; that is, the respiration is neither to be accelerated nor retarded too much; but a very full inspiration must be taken. The attention must now be fixed upon the action in which the patient is engaged. He must depict to himself that he sees the breath passing from his nostrils in a continuous stream, and the very instant he brings his mind to conceive this apart from all other ideas, he sleeps. 'The instant the mind is brought to the contemplation of a single sensation, that instant the sensorium abdicates the throne, and the hypnotic faculty steps in its oblivion.'"

These various methods seem to be devices for changing the current of conscious cerebration. In my practice I have found the plan of taking deep inspirations commended. But for the most part these expedients succeed for a night or two, and they can scarcely be relied upon. These sundry practices may even keep up wakefulness; when the mind attends to them too closely, they may sustain the self-consciousness which keeps the brain from resting. To try hard to go to sleep is often the surest way to keep awake. We do many things best when we forget ourselves, and going to sleep is no exception to the rule. Again, to promote the sleep of a person in bed, you should make sure that the bedclothes which cover him are sufficient and not excessive. If the covering bedclothes be especially arranged in quantity each night by thermometric guidance, so as to secure that the thickness of the upper clothes will give to the inmate of the bed a general feeling of comfort, and not of sleep-preventing discomfort from either local or general chilliness or local or general over-heating, sleep will be powerfully promoted. And, further, if these arrangements be made with the knowledge and approval of the patient we may gain the valuable adjuvant of his self-confidence as to sleeping, and establish within him a happy expectation likely to be realised. For your guidance I may tell you that from observations I have made I have found that in a large bedroom in the middle of a large house, without a fire or other modes of heating and with a window open, a Fahrenheit thermometer stood at 70° or upwards in very hot weather, and at 44° or less in very cold weather. At a temperature of 44° the upper bedclothing should be a sheet, three blankets, a light counterpane, and a light small blanket, not "turned over" at the top and not "turned in" at the bottom; while at a temperature of 70° it should be a sheet only. Between these extremes the changes should be gradual. These extremes should be the ends of a series of gradations passing through about nine terms. With a little care you can make a thermometric register, marking the suitable clothing for a given external temperature of the bedroom in any particular case, and so you may cure insomnia and prevent its recurrence.

In all cases the bedroom window should be open all night

and all the year round, and arranged so that it may be so without draught; the head of the bed should be away from a wall; and the best bed on which to lie is a hair mattress, covered with a sheet and a blanket, and supported upon a chain stretcher. In some cases a little food taken just at the time for sleeping is an efficient soporific. You may often observe that the good effects of a little nourishment—a cup of cocoa or a small piece of dry bread, taken upon getting into bed or upon awakening after a slumber which is too short for a night's rest, are most happy. You may usefully remember that sleep may often be induced by the temporary application of cold to the head or to the general surface of the body. A person who has been lying awake will often fall asleep at once upon regaining his bed after getting out of bed and washing his head, neck, and hands in cold water, or after following Charles Dickens's plan of standing at his bedside until he feels chilly, and thereupon shaking up and cooling his pillows and bedclothes, and then getting into bed.

In the toxic kinds of insomnia we must especially endeavour, as I have already suggested to you, to act upon the maxim, "*Cessante causâ, cessat et effectus.*" We must stop or lessen the consumption of tobacco, alcohol, tea, etc., as the case may be. A discussion of the treatment of gouty insomnia, and of the sleeplessness arising in some chronic kidney diseases, would involve a consideration of the whole question of the therapeutics of the maladies upon which these forms of wakefulness depend. Senile insomnia is very obstinate. Perhaps in the bromides, with full doses of hop or henbane, we have the most efficient and least harmful medicinal means of relief; while the promotion of sleep may be accomplished by an intelligent combination of some of the non-medicinal measures to which I have referred.

REFERENCES.

¹ Lectures on Pharmacology, New Sydenham Society's Translation. ² A Textbook of Pharmacology, etc. ³ Elements of Materia Medica, etc.

REMARKS ON THE DIAGNOSIS AND TREATMENT OF ARSENICAL NEURITIS.*

By JUDSON S. BURY, M.D.LOND., F.R.C.P.,
Physician to the Manchester Royal Infirmary.

BEFORE the outbreak of the present epidemic our knowledge of the symptoms of arsenical neuritis was based on the records of about 70 cases, which are to be found scattered through the literature of the last thirty years. That it was adequate to enable us to form a correct diagnosis is shown by the fact that my colleague, Dr. Reynolds, from a study of the prominent symptoms in a number of cases which came under his notice at the Crumpsall Hospital, was led to suspect and subsequently to prove the presence of the poison.

There can, however, be no doubt that the careful investigations of the features of the present epidemic which are now being carried on will lead to fuller and more accurate knowledge regarding the characteristic symptoms of arsenical neuritis. At present it is too early to speak positively in respect to some of the phenomena which have been observed, and particularly as regards their dependence on poisoning by alcohol or by arsenic. It may, however, be useful to draw attention to certain features which require further elucidation. Before doing so I may mention that hitherto our main help in diagnosing arsenical from the only other variety of neuritis—namely, the alcoholic—with which it is likely to be confused was derived from a consideration of associated symptoms.

Thus, in alcoholic cases we frequently found:

1. Physical signs of enlargement of the heart, together with symptoms indicating cardiac failure—namely, dyspnoea, dropsy, and a large tender liver.
2. Evidence of mental deterioration, which is characterised by a failure of memory associated with a peculiar disorder in the appreciation of time and locality.

* This article has been written in response to a kind request of the Editor that I should send him something on the treatment of arsenical neuritis.

On the other hand, in *arsenical* cases we did not expect to find impairment of heart or of brain, and based our diagnosis chiefly on the presence of certain symptoms which were known to result from arsenical poisoning. These are:

1. Certain skin lesions:
 - (a) A peculiar pigmentation, sometimes closely resembling that of Addison's disease.
 - (b) Herpes zoster, which is present in a small percentage of cases.
 - (c) Bullous or erythematous eruptions.
 - (d) A thickened condition of the skin over the knuckles and other places.
2. Loss of hair; falling off of the nails.
3. Intermittent dysuria or glycosuria.
4. Coryza and oedema of the eyelids.
5. Ulceration of the gums and fauces.
6. The presence or history of acute unaccountable attacks of indigestion, associated with nausea, salivation, and epigastric pain, and sometimes with vomiting and diarrhoea.

In the present epidemic most of the features just mentioned have been observed; it is important, however, to note that attacks of indigestion and other evidence of gastro-enteric disturbance, although occasionally present, have not been conspicuous, and in many cases have been entirely absent.

CARDIAC AND PSYCHICAL SYMPTOMS IN ARSENICAL NEURITIS.

Before leaving the consideration of symptoms which are associated with those of alcoholic and of arsenical neuritis, respectively, I would suggest the necessity of paying particular attention to the condition of the heart and to the peculiarities of any psychical disorders that may be present in the cases now under observation.

With regard to the heart there is no evidence, so far as I know, that arsenic directly attacks its muscular tissue; at the present time a few patients, who state that they have never taken much beer, show signs of cardiac enlargement, but it is difficult to absolutely eliminate the effects of alcohol. As regards psychical disturbance several writers have testified to its occasional occurrence in severe cases of arsenical poisoning; thus Alexander found incoherence of ideas, Marik speaks of weakness of memory, and Korsakow includes arsenic amongst the causes of psychoses that are met with in cases of multiple neuritis. In the case of a woman who is at present in the Royal Infirmary under the care of Dr. Dreschfeld, who states that she has only taken a small quantity of beer, there are, in addition to extensive pigmentation of the skin and well-marked symptoms of peripheral neuritis, certain mental symptoms, including a loss of memory for recent events, which closely resemble those found in cases of alcoholic paralysis.

DIFFERENTIAL DIAGNOSIS.

Let us now ask, Are there any peculiarities in the symptoms which we attribute to peripheral neuritis that would suggest the influence of arsenic rather than of alcohol? There appear to me to be three groups which require to be specially noted, namely:

- (1) *Hyperæsthesia* of the skin and muscles, which, although common in alcoholic neuritis, is more constant and generally more severe in the cases now under observation.
- (2) *Erythromelalgia*.—The vasomotor phenomena which characterise the condition known by this name, while only occasionally present in alcoholic cases, have been conspicuous features in the present epidemic.
- (3) *Ataxia*.—I have paid particular attention to the investigation of this condition in cases of peripheral neuritis, and both in the *Treatise* published in 1892 and in the article in Clifford Allbutt's *System of Medicine* I have insisted on the rarity of real inco-ordination of movement in cases of alcoholic neuritis. Hence I have been much struck by its comparative frequency in the present series of cases, and I trust that careful observations will be made with regard to it, as well as to the degree of any motor weakness with which it may be associated.

Ataxia, Loss of Knee-jerks, Bronzing of Skin.—On November 22nd a man was admitted under my care at the Manchester Infirmary, who showed marked inco-ordination in the movements of both arms and legs, but only a moderate degree of impairment in muscular power. His inability to stand with his eyes shut and his disorderly gait, in which the forepart of the foot was well raised in its forward jerk, made the case closely resemble one of tabes. The knee-jerk was absent, and cutaneous and muscular

hyperæsthesia were extreme. The skin everywhere was as deeply bronzed as in a typical case of advanced Addison's disease; it showed also a fine branny desquamation, while over the knuckles and feet it was thickened and scaly. There was coryza, and the tongue presented a characteristic silvery surface. In this case there was no mental disturbance. The heart was enlarged. The man stated that he had been in the habit of taking 10 to 12 glasses of beer a day for the last ten years. He is now (December 1st) much better, although the inco-ordination and the hyperæsthesia are still considerable. The pigmentation over the lower part of the abdomen and the buttocks is much darker than it was a week ago; this darkening is not due to potassium iodide or other drug. It is important to note that the left knee-jerk can now be elicited, for I have never known so quick a return of the knee-jerk in any case of alcoholic paralysis.

TREATMENT.

Removal of Cause.

The first essential in dealing with a case of peripheral neuritis is to find out the cause and to remove it, or to stop its action as soon as possible. The cause is nearly always some poison; and if the patient be withdrawn from its influence and placed under favourable conditions complete recovery is the rule. In the present epidemic arsenic appears to have been the potent factor, but let it not be supposed that alcohol is entirely innocent. In some quarters there appears to be a tendency to believe that alcohol has been over-rated as an etiological agent in the production of peripheral neuritis. On the contrary, all the evidence at present in our possession indicates that it is the most common cause of that disease, and, we may add, one of the most powerful influences in other ways which tend to cripple and shorten life. It may be hoped that at least one advantage of the present epidemic will be to direct public attention once more to the enormous quantities of alcoholic beverages which are still consumed in this country.

When we know that patients who visit our hospitals have been in the habit of taking ten, twenty, and even thirty pints of beer a day, and as a result are gradually but surely losing their physical and mental powers, and then reflect on the present arsenical panic, we begin to wonder why there has never been an alcoholic panic. The scare with regard to poisoning by arsenic has been fully justified, but surely consternation regarding poisoning by alcohol might be looked on as equally natural.

There appears to be a curious difference in the relationships of doctors and patients in respect to alcohol and to other poisons. If a doctor finds that his patient is taking lead, arsenic, or mercury in poisonous doses, he tells him so, and urges him to discontinue his dangerous practice. But if alcohol in large quantities is being taken, the doctor requires more courage to tackle his patient, for he runs the risk of offending, and possibly of losing, his client.

Nevertheless, the gain in self-respect ought to compensate for the temporary loss of a client, for, as Dr. Barlow has well said:

What can be more humiliating to us as medical men than to have repeatedly to attend people who every day are shortening their lives and converting a remediable condition into a hopeless disease, whilst we stand with folded arms, or write prescriptions, and have not the courage to tell them what is right, and stick to it?

Rest.

Having removed the patient from the influence of the poison the next thing is to place him under the most favourable conditions for recovery. Now in all except the slightest cases rest in bed is advisable. The patient is thus protected from exposure to cold, the pernicious effects of movement are reduced to a minimum, and local treatment can be carried out more readily and satisfactorily.

Nursing.

In the acute stage the suffering of patients with arsenical neuritis is often extreme; and it is of the utmost importance to relieve this as promptly and effectively as possible. The severest cases require a water-bed; this not only relieves pain better than an ordinary bed, but also gives more support to a weak patient, and thus lessens the danger to life arising from a feeble heart or from paralysed respiratory muscles.

In feeding the patient or in attending to his evacuations the nurse should exercise the greatest care and gentleness, so that all unnecessary movements on the part of the patient may be avoided.

On no account must she attempt to massage the limbs.

Relief of Pain.

For the relief of tender nerves and muscles there is nothing better than warm fomentations. It is best to apply them intermittently; a warm fomentation may be put on the painful part for half an hour, and the application repeated every four hours; a layer of hot cotton wool taking its place in the intervals. Occasional vapour baths may afford the patient great comfort; but they should not be used when the action of the heart is much impaired.

Drugs.

As regards drugs, in the early stages of neuritis, salicylate of soda and potassium iodide, either alone or in combination, appear to be of service. Neuralgic pains may be relieved by the administration of antipyrin, phenacetin, or exalgin; but when the suffering is very great the hypodermic injection of morphine becomes necessary. Let it be particularly noted that in the acute stage strychnine must not be given.

Diet.

But of far greater importance than drugs is the regular and careful administration of nourishment, in the forms of boiled milk, beef tea, beef extracts, soups, and broths. Benger's food or peptonised gruel may be required, and when vomiting is a prominent symptom nutrient enemata should be administered.

Complete rest in bed in a well-ventilated room, careful feeding, and exposure to sunlight are the essential points in the treatment of the early stages of multiple neuritis.

CONVALESCENCE.

When the acute symptoms have subsided, but not before, recourse may be had to massage, electricity, and tonic treatment. In the acute stage massage would be unendurable, and certainly very hurtful; but its application must not be delayed too long. It may be employed as soon as extreme pain and tenderness have disappeared. At first massage should be employed in the gentlest manner and only for short periods of time; but as soon as the patient stands it well it ought to be regularly and vigorously applied. The patient should also be encouraged to make voluntary movement against resistance; and other modes of Swedish exercises can be employed with advantage. Inco-ordination of movement is best treated by Fraenkel's method, the essential feature of which is to submit those muscles which manifest the inco-ordination to a series of graduated and systematic exercises.

By these means the nutrition and strength of the muscles and the co-ordinating power are improved, while any tendency to contracture is overcome. Moreover, the patient's capacity for assimilation of food is thus steadily increased.

The restoration of the degenerated nerves and muscles may also be aided by the daily application of electricity. The constant current is the most useful in stimulating the nutrition of the affected muscles. Large electrodes are desirable in order that as much muscular tissue as possible may be reached by the current. As soon as the muscles respond to a weak faradic current this form of electricity may also be employed with advantage. A daily warm bath, followed by vigorous friction to the skin, is of value, whilst tonics and cod-liver oil often prove of great service. Arsenic has been recommended in the treatment of multiple neuritis, but of course it must not be given in the cases under consideration. Of all drugs that may be regarded as tending to the restitution of the paralysed parts, strychnine is unquestionably the most valuable, and it is better to administer it hypodermically than by the mouth. It is advisable to begin with a small dose, say $\frac{1}{16}$ gr., and then gradually increase the quantity.

From first to last, abundant fresh air and sunlight are of the greatest importance; and as soon as the patient is able to take outdoor exercise a change of air is often advisable; in many cases, however, it will be some time before local massage can be entirely dispensed with.

REFERENCE.

¹ *Medical Chronicle*, 1892-93.

MEDICAL PRACTITIONERS IN LISBON.—According to official statistics for the current year recently published, the number of medical practitioners in Lisbon is 174. This gives a proportion of 1 to every 1,902 of population.

THE SURGERY OF CHRONIC ULCER OF THE STOMACH AND ITS SEQUELÆ:

BEING A SERIES OF CASES IN WHICH OPERATIONS WERE PERFORMED FOR VARIOUS NON-MALIGNANT DISEASES OF THE STOMACH.*

By B. G. A. MOYNIHAN, M.S.LOND., F.R.C.S.ENG.,
Assistant Surgeon, Leeds General Infirmary; Consulting Surgeon,
Skipton and District Hospital, etc.

THE various conditions resulting from chronic inflammatory processes in or near the stomach, and giving rise to dilatation of that organ, may be classified as follows:

1. Temporary, intermittent narrowing of the pylorus, reflex in character, the result of muscular spasm. This condition is largely or entirely dependent upon chronic ulcer of some portion of the stomach.

2. Circumscribed or annular fibrous constriction at or near the pylorus.

3. Diffuse cicatricial induration at or near the pylorus or first portion of the duodenum.

4. Cicatricial contraction and induration with adhesions between pylorus, duodenum, abdominal wall, liver, gall bladder, etc.

5. Cicatricial contraction and induration at the site of an ulcer situated in the body of the stomach, giving rise to the condition known as "hour-glass contraction."

6. Adhesions external to, and primarily independent of, the stomach and duodenum originating in inflammatory conditions of the gall bladder, bile ducts, etc., or rarely in traumatism (Krönlein).

1. The condition of *pyloric spasm*, inducing retention of the stomach contents, and, as a sequel, the gradual dilatation of the viscus, is one now generally recognised by surgical authority. Associated with local spasm are hyperacidity of the gastric contents and frequently, if not invariably, chronic ulceration of the stomach. The resulting group of symptoms is described by French surgeons as "*la maladie de Reichmann*" and is looked upon therefore as a distinct morbid entity. The Continental teaching would have us consider that the chronic ulceration depends upon, and is induced by, the hyperacidity of the gastric secretion, but there are very compelling reasons for believing that the ulcer is not the outcome but the cause of the hyperacidity, though the perpetuation of the ulcer may indeed result. The spasmodic contraction of the pylorus is held by some to be independent of any organic disease of the stomach to be "functional." A case is recorded by Schnitzler in which a tumour could at times be felt in the neighbourhood of the pylorus. At the time of the operation nothing was at first discovered, but within the few minutes of observation a definite hardness, resembling a tumour, was thrice observed as the result of forcible pyloric contraction and spasm.

The precise sequence of events in these patients is difficult or impossible to determine; probably chronic ulceration of the stomach induces pyloric spasm, hyperchlorhydria, gastric stasis and consecutive dilatation. After gastro-enterostomy, as Carle and Fantino have shown, the hyperacidity disappears. Probably the rest which is thereby assured to the organ allows healing of the ulcer, and as a result subsidence of spasm and hyperacidity.

2. *Circumscribed Fibrous Constriction at the Pylorus.*—This ring-like narrowing results from the healing of a comparatively small circular ulcer. The fibrous ring may be $\frac{1}{2}$ to $\frac{3}{4}$ or $\frac{1}{2}$ inch in breadth, is situated either precisely at the pylorus or within an inch of it on one side or the other, and is sharply defined. The scar of the ulcer is found, in the cases that present themselves to the surgeon, more often on the anterior than on the posterior surface. The patency of the pylorus is reduced to a varying degree; there may be slight constriction, or, as in one of my cases, a narrowing to a degree permitting only, and with difficulty, the passage of a director. It is in this condition that pyloroplasty is attended with the fullest measure of success. The stricture, at times almost string-like in its sharp and abrupt limitation, is readily divided, and healthy supple tissue, lending itself easily to suture, is found on each side of it.

* Read before the Mirfield and District Medical Society.