Remarks on Hospital (i.e., Asylum) Treatment of the Acutely Insane.

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LET me first explain or define the terms used in the title of this paper. By "hospital treatment" I mean treatment in any institution where patients have to be treated in numbers together, and where it is possible to have efficient nursing. My remarks, however, will have special reference to county and borough asylums as they exist at present. By the "acutely insane" I mean those patients who are suffering from insanity which has begun at a recent date, and which we may hope to relieve.

I propose to remind you of certain important factors in the ætiology of acute insanity, from these ætiological factors to deduce principles or aims of treatment, and then to indicate certain methods by which we may attempt to carry out those principles in practice.

Ætiological factors in the production of insanity and disordered brain function may be arranged according to their effect on the brain structures under five heads.

(1) *Lower Power of Natural Resistance to Unfavourable Conditions.*

This may be inherited or it may be the consequence of previous injury or disease, and we postulate with it some permanent structural deformity or deficiency. This mental instability or predisposition to mental disorder we find in a large proportion of asylum patients, in some cases being so marked that it necessitates a permanent detention.

(2) *Physical Injury.*

This may be produced by—

(*a*) Action of the direct rays of the sun;
(*b*) Powerful electric discharges;
(*c*) Concussion and other mechanical shocks;
(*d*) Pressure by tumours, hæmorrhages, etc.

The first three varieties of physical injury applied to the brain are liable to cause much permanent damage, and accordingly suggest a bad prognosis. In the treatment of such cases the initial period of rest requires to be unusually prolonged so that all destroyed tissue, hæmorrhage and toxic material may be cleared away before the cells attempt to work, and the subsequent process of education or training of function requires to be very gradual. These ætiological factors, however, being past and gone, do not have much effect on the principles of treatment. If there is pressure, operative interference or other special treatment is necessary to remove it. Pressure may injure the brain cells not only directly, but also in an indirect manner, by altering the local circulation of blood and lymph, and thus producing deficient nourishment and toxic action.

(3) *Strain.*

Strain, overwork, or exhaustion of the brain cells may be produced in various ways, as by—

(*a*) Severe or frequently repeated grief, fright, or other mental shocks ;

(*b*) Long-continued apprehension, worry, or other depressing emotions ;

(*c*) Mental overwork, or insufficient rest and sleep.

Under "strain" we may also include such psychic causes as a forced or unbalanced education, and any unhealthy mental environment of long duration. In many cases the psychic elements constituting the strain have already for the most part been removed when the patient was brought away to the asylum, and therefore do not require much attention in treatment. In other cases, however, special psychic treatment is necessary with the object of removing any psychic causes which still remain ; and in some cases, indeed, this is the only special treatment required.

The mere fact of strain implies a need for rest. But strain has more commonly produced the mental disorder or insanity by its evil psychic influence on various bodily organs, and by the consequent production of metabolic and bacterial toxins. It is, therefore, these last more immediate causes which chiefly require attention in treatment, at any rate in the more acute stages of the disorder and when the patient is first admitted to an asylum.

(4) *Deficient Nourishment.*

This may be local or general in origin, that is, it may be the result of changes in the vessels or changes in the plasma. Examples of local causes are cerebral arterio-sclerosis, other forms of cerebral arteritis, cerebral thrombosis, vaso-motor disturbances, and heart disease. Examples of general causes are severe or frequent hæmorrhage or discharge, anæmia, all diseases of blood-forming organs, starvation, disturbances of digestion, and all wasting diseases.

(5) *Chemical Injury.*

This occurs by means of the plasma. It plays some part in the causation of the symptoms in probably every case of acute insanity, and therefore from the point of view of treatment its importance can hardly be exaggerated. The poisons or toxins which may be responsible for disordered brain function are very numerous. They may be divided into three classes:

(*a*) Organic poisons the result of metabolic or nutritional irregularities;

(*b*) Organic poisons produced by parasites;

(*c*) Organic and inorganic poisons introduced into the body from without.

(*a*) A more or less toxic state of the plasma is produced in the following examples of irregular metabolism and nutrition: myxœdema, Graves' disease, diabetes, disorders of liver, pancreas and other digestive organs, starvation, heart failure through its influence on the liver, etc., Addison's disease, gouty diathesis, rheumatic diathesis, gout, uræmia, conditions of changed metabolism occurring in the reproductive organs at the periods of puberty, childbirth, climacteric, etc., dyspepsia, and constipation. It appears probable that in the course of digestion of certain articles of food, such as meat, eggs, shellfish, etc., certain products are formed which are toxic to some people, but which in normal individuals are counteracted by certain internal secretions, such, for example, as that manufactured in the thyroid gland. At any rate, we know many people become ill and suffer from such symptoms as headache, neuralgia, nausea, urticaria, mental clouding, lethargy, depression, irritability or even acute insanity if they eat much of

certain foods or if they become constipated. In fact it seems possible that in some cases the hereditary element lies in a defect rather of a particular gland or other organ than of the central nervous system.

In some cases the toxins responsible for the disturbed brain function are the ordinary products of normal metabolism, which have accumulated in the plasma owing to deficient excretion (as in Bright's disease), or to some interference with the local circulation of lymph (as in general paralysis).

There is a close relation between disturbed metabolism and bacterial invasion, each tending to result in the other, and in many cases it is impossible to estimate the part played by these two agents in the production of a toxic state of the plasma. In Graves' disease, for example, it seems likely that the excess of thyroid secretion predisposes the body to certain bacterial invasions, thus explaining the recurrent attacks of insanity sometimes associated with this disease.

(*b*) Conditions in which parasites produce a toxic state of the plasma include the following: All infectious diseases, all invasions of the body by fungi, moulds, amœbæ, worms, etc., all forms of septic inflammation, and all catarrhal states of mucous membranes and hollow organs. It is probably not uncommon for microbes to be flourishing on a surface or in tissues and producing toxins without setting up any prominent local signs.

It is highly probable that certain well-defined states of mental disorder are primarily dependent on alterations of immunity, much as invasion by Fraenkel's pneumococcus is so dependent. The pneumococcus is not an uncommon inhabitant of the mouths of healthy people, but it is only when the body resistance has been lowered by exhaustion, impure air, etc., that the individual gets pneumonia. In a similar way it seems likely that some common microbe, to which the majority of people are immune, is the essential cause of certain types of insanity, particularly those known as recurrent mania, recurrent melancholia, *folie circulaire*, and manic-depressive disease. In fact, in some cases of insanity with marked heredity, we can imagine the inherited fault to lie in this obscure quality of the body known as immunity rather than in the cerebral structures or any particular gland.

(*c*) The following are examples of extraneous poisons which

may help to set up mental disorder: Alcohol, morphine, hyoscine, cocaine, ether, chloroform, salicylates, quinine, and practically every drug of any potency. Some of these quickly set up a temporary mental disorder or intoxication not termed insanity; and if, in these cases, more lasting mental disorder is set up and symptoms exist long after the narcotic has been excreted, we are justified in attributing the remaining symptoms to abnormal metabolism and bacterial invasion.

For example, this hypothesis would explain the variety in the types of cases of alcoholic insanity by infections with different microbes or by disordered metabolism in different organs. The acute symptoms arising from sudden deprivation of a habitual narcotic—opium, for example—we may attribute to general disturbance of metabolism brought about by the sudden change in the composition of the plasma.

After a consideration of the above ætiological factors, the following conclusions suggest themselves:

(1) A large proportion of our cases have a low resistance power, the result of heredity or previous injury or disease. Such cases are particularly apt to recur, and their treatment, both curative and preventive, requires to be largely psychic.

(2) Physical injury has a bad effect on the results of treatment. Such cases are best treated by prolonged rest followed by very carefully graduated exercise.

(3) Though the main items of mental strain are removed by bringing the patient away to the asylum, there are still left certain suggestions and memories which must have an injurious effect. These depressing suggestions and memories should not be renewed, as by visits and letters, but should be counteracted by supplying suggestions of rest, hope and cure.

(4) Any cause of deficient nourishment, local or general, should be treated. Food should be in the most assimilable form.

(5) In practically all cases of recent mental disorder metabolism is much deranged. To enable normal metabolic activities to be regained, all organs should for a time be rested as thoroughly as possible, and therefore food elements should be of the simplest. There is an excess of waste products in the plasma to be excreted. To prevent permanent damage to the brain cells the toxins in the plasma should be diluted as freely and quickly as possible. The excretory actions of the skin and lungs are best stimulated by fresh air.

(6) The existence in the plasma of toxins which have been produced by bacteria or other parasites is the immediate cause of the mental disorder in many cases. In practically all cases of mental disorder of recent origin bacteria have a greater or less share in producing the symptoms, flourishing on the mucous membranes and in the tissues.

We require to prevent the entrance into the body of any more parasitic bacteria. We require to assist the body to destroy the parasites already there. Oxygen of fresh air is a most natural and effective bactericide.

(7) A case of acute insanity should be looked upon as a variety of vicious circle, to be attacked from all points. The vicious circle is somewhat as follows :

Psychic strain, disorder of metabolism, metabolic toxæmia, bacterial invasion, bacterial toxæmia, psychic disorder, psychic strain ; or disorder of metabolism, metabolic toxæmia, bacterial invasion, bacterial toxæmia, psychic disorder, psychic strain, metabolic disorder ; or bacterial invasion, bacterial toxæmia, psychic disorder, psychic strain, disorder of metabolism, metabolic toxæmia, bacterial invasion.

(8) The stage of convalescence may be said to be beginning when the mental symptoms have lost their debilitating effects and when the general bodily condition approximates to the normal. This stage of convalescence should be treated by gradually increasing exercise in a suitable mental atmosphere.

The above conclusions give us the following five principles or aims of treatment : during the stage of active disorder and destructive process : (1) rest the whole body as thoroughly as possible, (2) keep the body well nourished, (3) eradicate parasites, (4) assist the excretion of toxins, and during the stage of convalescence, (5) exercise all functions gradually.

I will now mention certain matters of nursing and medical treatment, by means of which we may attempt to carry out these principles, and I will arrange my remarks under twelve heads.

(1) *Confinement to Bed in the Fresh Air.*

The first principle of treatment is to give rest, as complete as possible—rest, that is, not only to the nervous system, but also to every organ of the body. The only way we can attempt to do this is by keeping the patient in bed on the

simplest diet. The mere fact of being in bed is a strong suggestion of rest and quiet. Of course the cases which come to asylums are not usually early cases; they have been ill at least some weeks, and the mental symptoms have often become very pronounced and troublesome. It may therefore be difficult to keep a patient in bed at first, but in such a case a sedative for a day or two will soon establish the habit of lying in bed, and very rarely, indeed, are the symptoms quite so active and troublesome after a few days' thorough rest.

Bed treatment has been in much disfavour with asylum physicians, and for very good reasons. When this treatment was tried the patients were kept in a stuffy dormitory or in still stuffier single rooms. In consequence their skins were unable to get rid of their excretions and presented an unhealthy appearance, and by the patients breathing their own air over and over again they only helped the growth of microbes and hindered the exhalation of waste matter. I have never yet seen a single room which was large enough or sufficiently well ventilated when the door was closed to accommodate a case of acute insanity. Such patients were also given a diet as complex and full as they would take, including such things as tea, coffee, meat, and alcohol. The consequence was, unnecessary work was given to the organs, healthy metabolism was interfered with, the plasma received an addition of toxic metabolic products, and the brain cells were irritated and damaged more than ever. Physicians, of course, found that by getting patients up and keeping them in the fresh air they often did very much better, and they certainly had a better opportunity of using up the food given to them. But if they had kept them in bed on simple diet as well as in the fresh air, they would, I am confident, have done still better. There are some cases of recurrent insanity, however, which appear to do fairly well under almost any kind of treatment, having a tendency to run a definite course. These cases I attribute chiefly to bacterial invasion.

There is an idea I have found prevalent in asylums, encouraged no doubt by official reports, and that is, that it is a disgrace to have many patients in bed. I hope this idea will soon vanish, because it is, I am sure, very much better to have patients in bed unnecessarily than to have patients up who ought to be in bed. When the stage of convalescence arrives,

in which the habit of bed-lying should be broken and the brain should be stimulated to action, this is easily accomplished by moving the patient to a different ward.

This leads us to the question of what is the best way of keeping our patients in the fresh air when confined to bed. I would say that to a ward in which this treatment is carried out the following conditions should apply:

(*a*) It should be in the form of a verandah facing south. This verandah, if arranged for one row of beds, I would have 14 or 16 feet deep, if for two rows 22 or 24 feet.

(*b*) The roof should be ventilated and should contain some glass, so as to admit plenty of light.

(*c*) There should be no openings at the back of the verandah liable to set up strong draughts.

(*d*) There should be plenty of partitions or screens to isolate the more excitable and noisy patients.

(*e*) On the open side of the verandah should be a low railing sufficient to hide the beds and their occupants from the view of people outside.

(*f*) Some means of temporary protection for the open side should be devised for use during very stormy weather.

(*g*) There should be some form of heating, chiefly for the purpose of drying the air when unduly moist, the temperature in winter being kept over 40° or 45° F.

(*h*) For new patients who feel the cold, and for those who suffer from cold extremities, the nurses should rely on extra blankets, bed socks, hot bottles, etc.

(*i*) There should be plenty of commodes provided, and these should be protected and partially hidden by screens.

(*j*) A few yards away from the verandah there should be an unclimbable railing, which can be hidden by shrubs, etc. This is to prevent harm to a very impulsive patient, if he succeeded in rushing away before a nurse could prevent him.

(*k*) There should always be present at least two nurses. This is in case of a patient having a suicidal or other impulse, or being resistive or violent in conduct, and also for the efficient observation of a number of cases varying much in their symptoms.

(*l*) The night nurse's chair should be situated in the warmest and most protected place, and raised in such a manner that she can have a proper view of all her patients.

(*m*) The ward should be confined as much as possible to patients in bed and on simple diet. This is to simplify the nursing. Patients who are up have more scope for mischief, and are apt to interfere with the others.

(*n*) The ward should contain as few patients as a reasonable economy will allow, preferably not more than twenty, certainly not more than thirty. When in the case of every patient the urine has to be measured, the motions kept each day, the temperature, pulse-rate, and respiration-rate to be recorded at least twice a day, the weight to be noted twice a week, each passing of urine and movement of the bowels to be recorded, his mouth to be cleaned once or twice a day, and special treatment by diet, medicine, baths, etc., to be administered, twenty patients are, I feel sure, quite enough for one nurse to properly supervise.

Some asylums have had verandahs provided for treating tuberculous cases, but very few so far use them for treating the acutely insane. However, we can do a great deal in this direction by adapting present wards. I have recently here on the women's side prepared a ward on these lines. The ward is on the ground floor, has six windows facing south, six facing north, and a row of single rooms facing west. The sashes of the six windows on the south side have been entirely removed, and the ventilation of the single rooms has been improved, the windows on the north side being kept closed, except in very warm weather. The beds are arranged in two rows with their heads to the north, and are at a sufficient distance from the south windows to escape any rain that may come in. There is nothing to prevent patients climbing out through the windows, except that there is always a nurse present; and if by any chance a patient happened to rush impulsively out through a window before a nurse could prevent her, she would only get into the airing court and could be quickly brought back. Some of the patients are allowed up during the afternoon, but with the exception of three who are attached to the ward as helpers the rest are entirely confined to bed. No separate accommodation has yet been provided in this asylum for tuberculous cases, and I therefore use this ward for both tuberculous cases and the acutely insane.

Another way in which we can give fresh air and rest treatment to some extent is by having the beds wheeled out into

the open during the day. This is easy to arrange in fine weather, and if there are shelters the beds can be wheeled under them during a shower.

(2) *Isolation and Observation.*

We can give thorough rest to the nervous system only by reducing to a minimum the stimulation of the sense organs. A certain amount of sense stimulation is necessary sometimes to prevent harmful auto-suggestion and the development of central hallucinations. This sense stimulation, however, should be as commonplace as possible, so as not to excite in any way, and is sufficiently supplied as a rule by the visits of the physician and the attention of the nurses. Music I think may be of use for this purpose, particularly quiet dreamy music from a gramophone or other automatic music machine. A certain amount of isolation is an important part of the treatment of all acute cases of mental disorder, and it is almost impossible to obtain it in an asylum when the patient is not confined to bed. There is no doubt that melancholic and other patients are often greatly distressed by what they see and hear other patients do, and such associations must tend to retard recovery. With regard to excited patients the teaching has been to let them roam about and "turn their superfluous energy into useful or normal channels." This appears good advice, and many cases do well under this treatment. But it is in recent recoverable cases, I feel sure, an error, and I believe many of our cases of chronic mania and dementia are the result of it. It has been quite a usual thing to see recently admitted patients led round the airing court, gesticulating, dancing, and shouting at everyone they saw, and working themselves up at intervals into states of fury, This means for the patient great expense of nervous energy, rapid katabolism all over the body, particularly in the brain and nervous system, greater accumulation of toxic waste products in the plasma, including that which bathes the brain cells, and more damage to the brain cells and their connections. Sufficient isolation for most cases can be provided by the use of screens, a few being large and fixed in position and others small and movable. Patients who have a habit of talking to themselves and answering other voices not only do not get sufficient rest themselves but are a great nuisance to

other patients in the ward. They should be more effectually isolated, at least until this habit is broken.

Actively suicidal patients ought of course to be placed near a nurse and in full view. However, under rest and fresh air treatment it is usual for the suicidal feelings quickly to diminish in intensity.

(3) *Psychic Treatment and Suggestion Therapeutics.*

Psychic mental or moral treatment, whether done consciously or not, is part of the *modus operandi* of every successful physician, and this treatment is specially necessary in mental maladies. The effects are most rapid or most noticeable in minor mental affections and the so-called psycho-neuroses, as neurasthenia and hysteria. It is an important part of the ordinary asylum treatment with its discipline and its occupations and amusements. Psychic treatment consists of influencing conduct and bodily condition by ideas, and making these ideas part of the subconscious self. The necessary ideas may be inculcated by a process of persuasion or by merely suggesting them under suitable conditions. Though all psychic treatment may be said to be suggestion treatment, it is better to distinguish between persuasion and "suggestion" in the narrower sense of the hypnotists. We ought in all cases to ignore the patient's faulty ideas and attempt to build up in his reasoning mind a self-reliance and a moral conscience. In some cases the mere affirmation or suggestion, either direct or indirect, of suitable ideas is quite effective. Ideas built up by processes of reasoning tend, however, to be more permanent. The effects of suggestion may be greatly heightened in some cases by the various methods of fatiguing the senses. The term "hypnotism" is by many people confined to this suggestion treatment when aided by sense fatigue.

The mental atmosphere of a ward arranged on the lines I have indicated suggests to the patients that something is being done to cure them, it inspires a confidence in both physician and nurses, and suggests a time of rest and relief from care and worry. Everything should be done to promote quiet: nurses should wear rubber heels, no visits of people from other wards should be allowed, and if a patient becomes noisy and a source of annoyance it should be reported at once, when he

may be screened off or placed in a single room, or perhaps a few well-chosen words from the physician will be sufficient to quieten him.

It is sometimes necessary to make special attempts at supplying proper suggestions, and occasionally this will be aided by hypnotism. I have occasionally used hypnotism for cases of melancholia, with good effect. I can imagine that a gramophone set to go for an hour, with various suggestions in the physician's voice of sleep, rest, hope, cure, etc., might be of use, but I have not had an opportunity of trying it. A continued iteration in multitudinous form of the one idea of sleep might perhaps in many cases have quite as good an effect as a dose of paraldehyde.

When such mental symptoms as great excitement or confusion exist, psychic treatment can have little or no effect; but as consciousness gradually clears the results of suggestion should receive the careful attention of the physician.

While a patient is actively suicidal it is, of course, necessary to adopt means of keeping him under continuous observation. Unfortunately this constant watching is felt by the patient, and is a great source of irritation and evil suggestion. The ideal to aim at is to have the patient watched without his noticing it. This continuous observation is certainly done best and with the least obtrusiveness when the patient is in bed. There is no doubt that continuous observation is greatly overdone in some asylums and does the patients a great deal of harm.

(4) *Sepsis in the Mouth and other parts.*

Nine out of ten cases admitted to county and borough asylums have a foul condition of mouth. Of course, carious teeth are nearly as common in the sane of the same class of people, and I do not say that every one of our cases whom we find with a septic state of the mouth owes his attack of insanity primarily to that sepsis. But I do say that oral sepsis greatly aggravates the mental symptoms and calls for urgent treatment, and in some cases it has been the most important cause of the insanity. I think a good procedure is at once to extract all carious teeth and stumps, and to direct a nurse specially set apart for this work to clean the mouth twice a day, using borax

and glycerine or some alkaline solution, swabs of wool, and short lengths of silk; and if there is pyorrhœa alveolaris I also apply tincture of iodine to the teeth occasionally.

The other more common sites for catarrhal and septic conditions are the naso-pharynx, the ears, the colon and rectum, other parts of the alimentary tract, the lungs, the uterus, the urethra, the bladder, and the kidneys.

For catarrh in the naso-pharynx, if severe, I am in the habit of douching with solution of sod. chlor. or sod. bicarb., with the addition sometimes of a little cyllin; in some of the milder cases I spray the nose with sanitas oil from a vaporiser, and when the condition is chronic I add iodine to the oil in the proportion of 1 to 5000. The danger of infecting the middle ear requires to be remembered, and we sometimes come across a case of sinus suppuration requiring operation.

Chronic otorrhœa and mastoid disease may be a source of septic absorption, and ought to be properly treated at once.

Various catarrhal and septic conditions of the colon and rectum are not uncommon, but the only treatment necessary, as a rule, is milk diet and saline injections. For more severe inflammation of the colon washing with 4 to 6 pints of solution of hydrarg. perchlor. (1 in 6000) or argent. nit. (20 or 30 grs. to the pint) may be required, and of course fissures, abscesses, etc., require their appropriate treatment.

In connection with constipation there is an antiseptic precaution worth mentioning. When an oil or other enema is being given to a case of very severe constipation there are apt to be some bacterial toxins set free and absorbed. This result may be to some extent counteracted or prevented by adding to the enema some antiseptic or volatile oil, such as ten drops of oil of eucalyptus.

In treating catarrhal and septic conditions of the stomach and small intestines, milk diet and regulation of the bowels often effect an early cure, though antiseptics are of service. When there is fermentation or a catarrhal state of the stomach salol, gr. v to x three times a day, or one drop of liq. hydrarg. perchlor. every hour for a few days, or an acid mixture after meals, may be given, but usually copious water drinking with a slight alkali before meals will very quickly bring about a cure. The intestinal antiseptic on which I rely is calomel. I give this to many of my cases during the period of active

disorder, usually one grain once or twice a week. When a case first comes under treatment I often begin by giving one sixth of a grain of calomel every hour for six or twelve hours, or until the bowels are moved. To some cases—those with high blood-pressure or whose motions tend to remain offensive in character—I give one sixth of a grain three times a day for some weeks.

For abnormal bacterial action in the alimentary canal treatment by giving buttermilk or lactic acid bacilli is being strongly recommended at the present time. I have had no experience of this treatment, however, though I intend to try it in future cases of persistent intestinal auto-intoxication.

The lungs may be the seat of various bacterial infections, which are best kept in check by intestinal inhalations or by the internal administration of such antiseptics as terebene and creasote. Septic absorption from the uterus is common in puerperal cases, and it may sometimes exist without giving any very distinct evidence. If there is any reason for suspecting a septic condition the cervix should be dilated sufficiently to admit a finger, the interior of the uterus should be explored and any retained products removed. In some more chronic cases a blunt curette may be used, but it is safer not to use a curette in these cases lest the infection be spread into uterine sinuses. The interior of the uterus should be well douched with solution of hydrarg. perchlor. (1 in 1000), followed by saline solution; it should then be dried with swabs, and finally the surface touched all round with iodised phenol. No packing is necessary.

Stricture of the urethra may set up septic absorption both at the site of an ulcer behind the stricture and in the bladder from consequent cystitis.

Tubercular and septic conditions of the bladder and kidneys are occasional sources of septic absorption. Cystitis with alkaline urine is, as a rule, quickly cured by the administration of hexamethylene tetramine 10 grs. three times a day, but some bacilli are very resistant to this drug, and it may be necessary to wash out the bladder with some special antiseptic. The organisms found in these latter cases are most commonly colon bacilli, gonococci, and tubercle bacilli. For bladder irrigation probably the most useful antiseptic is silver nitrate, beginning at a strength of two grains to the pint and gradually

increasing up to ten grains to the pint. Gonorrhœal cystitis is sometimes very resistant to treatment, and may require some special method of irrigation such as Janet's. Tubercular cases do not require irrigation, of course, unless complicated by other organisms. Occasionally a case of cystitis will refuse to improve until an operation is performed and the bladder drained. We should not forget that a chronic case of cystitis may be due to the typhoid bacillus even when it is years since the attack of fever. Probably the commonest site, however, for a local typhoid infection lasting years after the fever is the gall-bladder. These are the "carriers" who probably explain many of the outbreaks of typhoid in asylums.

Dr. Suckling, of Birmingham, has drawn attention to floating kidney as a cause of insanity. He appears to be of opinion that the frequent slight kinking of the ureter which occurs in these cases increases the pressure of the urine in the kidneys, predisposes the kidneys to bacterial invasion and causes absorption of any toxins in the urine. He appears to think these cases common. I cannot say that this has been my experience, but it seems to me not unlikely that some of those patients who improve in bed but relapse again when they have been got up a few days or weeks really suffer from the condition of undue mobility of the kidney.

Just now two special methods of treating septic conditions are being lauded, and they promise to be useful in asylum practice—Bier's hyperæmic treatment, and the vaccine treatment. I have had no experience of these treatments, however, and only mention them as being well worth our study. There is one point in connection with sepsis I wish particularly to emphasise, and that is, that we can certainly have bacterial invasion of a part and the absorption of toxins without any noticeable local signs. For example, we may have bacteriuria and not know it until we examine the urine for bacteria, the resulting cystitis being so slight as to escape notice.

(5) *Disturbed Metabolism.*

Most states of disturbed metabolism subside on giving rest to the organs in the way I have indicated, but there are certain special disorders of metabolism which require special treatment. Some of these disorders are very imperfectly

understood and their treatment is accordingly unsatisfactory. Perhaps the commonest of these is Graves' disease, which in slighter forms is a relatively common disease in asylums. The treatment of Graves' disease which now promises the best result is that known as the antitoxic treatment. Thare are several preparations made by E. Merck and Parke Davis & Co., some being made from the serum of thyroidectomised animals, and others from the milk of such animals.

(6) *Antiseptics and Sanitation.*

Seeing that parasitic germs play so large a part in the diseases we have to treat, the use of antiseptics either to the surroundings or to the body itself is a subject of the greatest interest. We may consider every new case a store of evil germs, and therefore, even if the reception ward is an open-air ward, the walls, floors, and other surfaces require frequent attention to keep down the germs. At least every month the walls, etc., should be washed with soap and water and some antiseptic, or they may be sprayed or washed with an antiseptic alone. The best antiseptics or disinfectants for this purpose are those which liberate oxygen, as chlorinated lime ($1\frac{1}{2}$ oz. to the gallon) and sanitas. Any decorations of the ward should be of the simplest character, and nothing should be used which may harbour dust or be difficult to wash. The nurses should wear washable outside clothing, the women always wearing washable dresses, and the men, while in the hospital wards, wearing white overalls. I have already dealt with internal antiseptics under the heading of "Sepsis."

(7) *Regulation of the Bowels.*

This is an extremely important part of treatment. For some cases all that is necessary is to give a grain of calomel once or twice a week at night followed by a dose of mist. sennæ co. next morning. During the stage of acute disorder I aim at the patient having one or two motions of a soft consistence in the twenty-four hours. If the calomel twice a week is not sufficient to produce this, I usually prescribe an alkaline saline aperient containing some intestinal stimulant such as cascara, senna, or nux vomica. The mixture I am giving to

many of my cases at present contains mag. carb., mag. sulph., cascara, and peppermint. This is given with water half an hour before a meal three times, twice, or once a day, according to need. Later I substitute for this a dose of liquid extract of malt with cascara.

Because one is very liable to be misled by reports on the state of the bowels, and because it is most important to have a full knowledge of the condition of the alimentary canal, I think the physician should himself see the motions daily of every one of the acute cases. It is a simple enough matter for the nurse to keep all the stools, so that the physician may inspect them altogether at a fixed time in the day, making notes in each case of the conditions found. This does not take up much time and gives very valuable information.

Sometimes in a case of very severe constipation an initial treatment with a petroleum or vaseline preparation is found beneficial. This lubricates the intestines, prevents to some extent absorption of toxins, and favours efficient peristalsis. The other well-known modes of treating habitual constipation may occasionally be required during the stage of convalescence when ordinary diet is being given.

(8) *Water Drinking and Saline Injections.*

One of the aims of treatment is to aid the excretion of toxins. Included in this is another aim—to dilute the toxins in the plasma as freely and quickly as possible. Thus there is an urgent call to introduce into the blood an abundance of water. Treatment by saline rectal injections is used by many physicians now, and the improvement in some cases is most marked. This is no doubt in great part due to the process of washing out the toxins from the plasma, but I think in some cases it may also be due to some beneficial effect on the mucous membrane of the colon, which inhibits the growth of microbes there. The washing-out process—diluting the plasma and assisting the excretion of toxins—can be done more easily by giving water by the mouth, and I give acute cases at least ten ounces of water before each meal.

(9) *Milk or Simple Diet.*

If we accept it as a fact that in a case of mental disorder there is more or less disturbance of the digestive functions and

that the alimentary tract is particularly prone to fermentations and microbic infections, it follows that we should give a diet of the simplest character which will contain sufficient nutriment and at the same time give as little work as possible to the digestive organs. Therefore at the beginning of treatment I give nothing but milk, sometimes much diluted, and later I gradually add bread and butter, farinaceous foods, grated cheese, and eggs, but as a rule so long as the patient is in the reception ward I do not allow meat, meat extract, tea, or coffee.

During convalescence the diet should be changed gradually until it approximates to what the patient will have when discharged.

(10) *Clinical Observations.*

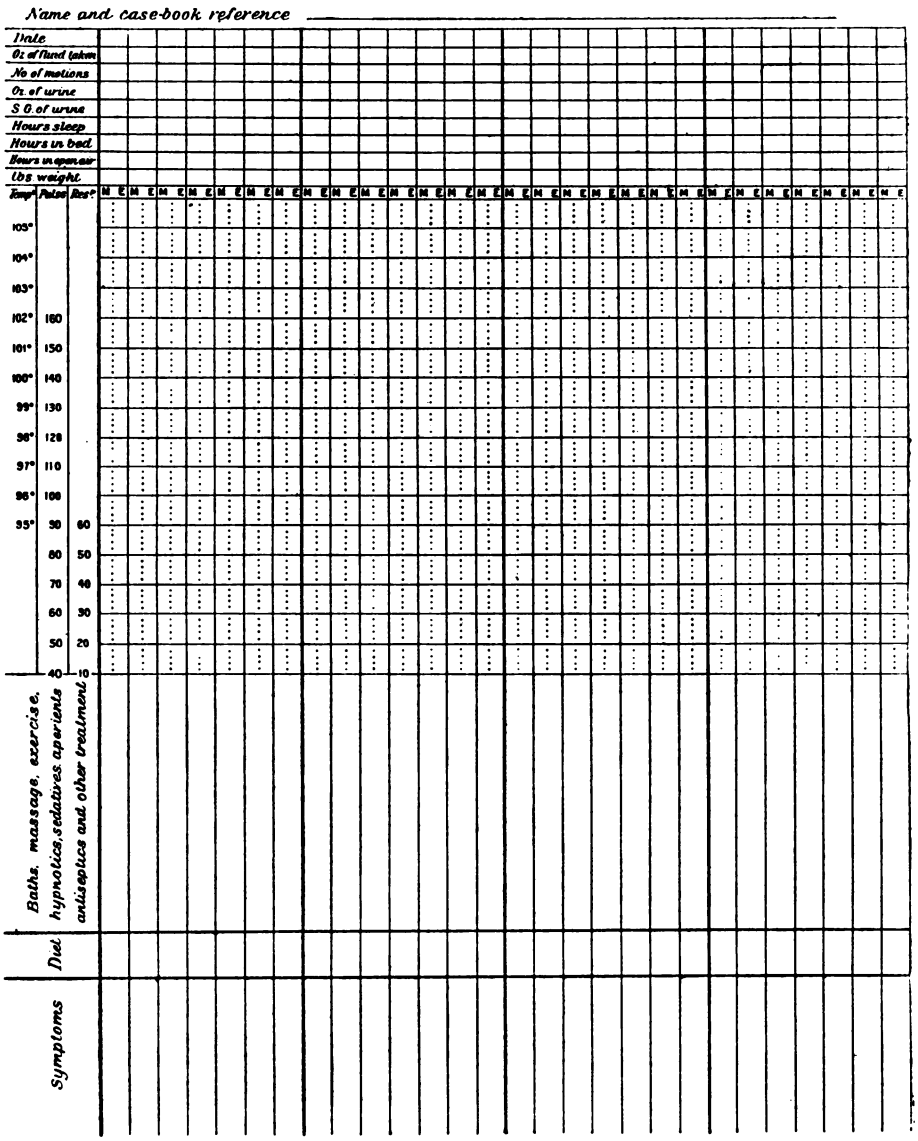
During the acute stage of the disorder the amount and specific gravity of the urine should be recorded each day, and the nurse should put out samples for inspection and analysis once a week. We may note at intervals the twenty-four hours' excretion of total solids, of urea, of chlorides, of phosphates and of purin bodies. All these observations give us information about metabolism, and an absence of chlorides strongly suggests particular microbic infections. The weight during the acute stage should be recorded twice a week, being our chief indicator as to the amount of diet and sedatives to give. I here show you a copy of the clinical chart I am now using.

You will notice that the space for diet is very narrow. This is because I keep a list of the diets I prescribe, and specify them on the chart by their numbers as marked on the list. The column marked "Symptoms" is used for such records as those of blood-pressure and leucocyte counts.

(11) *Sedatives and Hypnotics.*

Since in a case of acute insanity we believe the plasma to be already loaded with toxins, we should avoid adding more in the shape of the active principles of narcotic drugs. But sometimes the symptoms have of themselves a markedly injurious effect on the general condition, forming, indeed, part of a vicious circle, and in such cases symptomatic treatment is thoroughly justified. In fact in some cases of acute insanity sedatives have

a decided curative value, our objects in giving them being to reduce peripheral stimulation of the senses, to subdue depressing



emotions, and to rest the nervous system. If these objects can be attained without the use of drugs so much the better.

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In giving sedatives we should be guided both by the mental symptoms and by the weight. A sedative will often sustain the weight better than an addition to the diet, and may be useful in any variety of emotional excitement, whether the patient is exalted or depressed.

The sedatives I use chiefly are sulphonal, a mixture of chloral and potassium bromide, potassium bromide alone, and hyoscine. If I want a hypnotic action alone I give paraldehyde or a mixture of this with potassium bromide.

Sulphonal is a very useful sedative, the quietening effect lasting some days. I prefer to give it in a single dose, 30 grs. for example, in the afternoon rather than in divided doses during the day. In some cases I give 40 grs. for a first dose, or I give 30 grs. twice during the first day. It should not be given continuously for more than a few days, and its use should be confined to patients in bed. The ill-effects—ataxia, hæmatoporphyrinuria and anæmia—are chiefly seen in patients who are going about and using their muscles.

A mixture of chloral and bromide makes a good sedative, useful particularly for its early effect. Potassium bromide is very useful in a variety of cases, but it is not uncommon for it to set up dyspepsia and loss of weight. The smaller doses of 10 to 15 grs., three times a day, I often find a great help. I have had no experience of the substitution of sodium bromide for the common salt taken in food—a method of giving bromide found very effective in epilepsy.

For a case of very acute excitement with excessive motor activity and violence, a hypodermic of $\frac{1}{200}$ to $\frac{1}{75}$ gr. of hyoscine may be given at once. This will relieve the most pressing symptom and give time for other treatment to take effect. It is, however, a dangerous depressant, and should only be used when urgently needed.

Under the rest and fresh-air treatment, in most cases sedatives can be dispensed with in a very short time, and the more perfectly this treatment is carried out the less need is there for the use of sedatives.

Paraldehyde I find very useful as a pure hypnotic, the usual dose being two drachms, with at least four to six ounces of water and a little syrup. It should not be given for many nights in succession, and its effect is much increased by the addition of 30 grs. of potassium bromide.

(12) *Exercise.*

One of the most important points for the physician to decide in treating a mental case is when to terminate the rest treatment and when to prescribe exercise, that is, when may the case be said to be beginning to convalesce. Of course, in a recovering or improving case there comes a time when further rest will tend to retard recovery, and when exercise will hasten it. In most cases, however, I feel sure it is much better to err on the side of an unduly prolonged rest than to work a weakened nervous system too soon.

During the stage of convalescence it is necessary to recall and perhaps educate and train all the mental and bodily faculties. We should attempt this in the most gradual manner, so as not to overtax the body in any way, and thus in time the patient will be adapted for his normal conditions of life. This is the part of treatment which is usually provided for better than any other in asylums, all the occupations and amusements benefiting in this way.

(1) Read at the meeting of the Northern and Midland Division of the Medico-Psychological Association, held at Beverley on October 22nd, 1908.

The Clinical and Post-mortem Aspects of the Status Lymphaticus.

By R. ERNEST HUMPHRY, M.R.C.S., L.R.C.P.Lond., formerly Assistant Medical Officer, Bucks County Asylum, Stone.

THE enormous importance of the disease under consideration is, I am sure, not adequately realised, and it is for this reason that I am particularly desirous of bringing the subject to the notice of members of the Medico-Psychological Association. In my opinion the status lymphaticus constitutes one of the most serious problems of medical science at the present time, especially in these days of deaths under anæsthetics.

The disease is characterised as being of great rarity, but I am convinced that this is far from the true state of affairs, and is only apparently so because the morbid changes are frequently missed on the *post-mortem* table. In instances of unexpected, and, perhaps, more or less sudden death, where very likely a dilemma arises at the necropsy, the death certificate must often