press upon his notice the advantage which would arise from a modification of the present system. The interview was a very satisfactory one, as the Chancellor, after full consideration of the various points which were placed before him, agreed to the wishes of the deputation, the result being that a clause was drafted and inserted in the Bill which, while removing the objection alluded to, would give the patient and the public an ample guarantee that no man or woman would be placed under care without having the advantage of proper supervision by the Commissioners in Lunacy, who, as matters now stand, have no authority over, nor indeed cognisance of, the many cases who, either in their own homes or in unlicensed premises, are secluded in such a way as to lead some to think that we are reverting to methods of dealing with the mentally afflicted, which, to put it mildly, are not consonant with modern ideas.

The suggestion that has been made, if duly legalised, would enable a patient suffering from a mild attack of insanity, or, as the clause puts it, "suffering from mental disease, but that the disease is not confirmed," to be placed in private care for a period of six months, provided that a medical practitioner certifies to the necessity for such treatment, and that the certifying practitioner and the person who undertakes the management of the case should notify the fact to the Commissioners in Lunacy, who would have the power of visiting and observing whether all that their experience has taught them to be necessary in such cases is done in the interests of the patient. In this way many who would otherwise be neglected, or if certified would be classed as "a lunatic or person of unsound mind," might be given a chance of recovery before the termination of the six months, while at the worst, if improvement had not taken place, the transfer to an asylum would in all probability be then recognised by the friends as a painful though unavoidable necessity.

The establishment of a clinic at asylums adjacent to large towns has had excellent results in the treatment of the incipient forms and early stage of insanity, and a like department in every large general hospital would doubtless after a time be recognised as of inestimable value in many cases which at present drift on to that point when nothing is left to the medical man when consulted but to advise the asylum and nothing but the asylum.

I have now to thank you for your presence here, and to say that my colleagues and myself are at all times most desirous of giving our medical brethren an opportunity of seeing all that goes on within the wards of our asylums and of replying to any questions respecting patients in whom you may be interested. We want to do away with the bad old system of not only locking our patients in but of locking the public out, as we believe that the more the outside world knows of the work done in asylums the less we shall hear of the suspicions and complaints which are happily becoming fewer and fewer every year, and the sooner will the time come when the aversion towards bringing a patient to a hospital or home for the insane will have passed away for ever, even from the minds of those who at present harbour memories of the time, now long gone by, when it might be said of those who had the misfortune to require treatment in such an institution, "Abandon hope all ye who enter here."

Enough, I trust, has been said to show that the subject of the insane and their treatment occupies at the present day a very different position in the mind of the public to that which it held at the beginning of the century, and that the large sums of money which have of late been spent in the provision of asylums, and in otherwise caring for the insane, have not been wasted nor, indeed, expended before they were required; but, in this, as in everything else, progress is the watchword of the day, and, while those who are in close touch with this special branch of our professional work, whether laymen or doctors, feel that much has been effected, yet they freely admit that much still remains to be done. We therefore ask for your sympathy in what is at times a trying and difficult position, for your co-operation in elucidating some of the problems in which we are interested, and for your active support in pressing forward any measures of reform which may from time to time be considered advantageous on behalf of those who are often looked upon as being of little

account in this world, mere cumberers of the ground, and past all human help.

NOTES.

¹ Abbreviated from a *History of the Insane in the British Isles*, by the late Dr. Hack Tuke, to whose valuable works I am indebted for much information upon the subjects treated of in this address. ² The late Dr. Arlidge, who was for many years a member of the Staffordshire Branch of the British Medical Association, and whose death was mentioned with expressions of the deepest regret at the meeting before which this address was delivered, was at one time associated with St. Luke's Hospital. According to a biographical notice in the *BRITISH MEDICAL JOURNAL* of November 4th, 1899, Dr. Arlidge, in his early days, "gave much attention to the subject of lunacy, and attended at Hanwell Asylum the lectures of Drs. Conolly and Hitchman, whose friendship he enjoyed throughout their lives.....He became Resident-Superintendent of St. Luke's Hospital for Lunatics, where he brought about the abolition of mechanical restraint.....In 1859 he wrote a work on the *State of Lunacy and the Legal Provision for the Insane*, which was dedicated to the Earl of Shaftesbury, Chairman of the Commission in Lunacy, and in 1857 he wrote for the *Psychological Journal* a series of reports on the Lunatic Asylums of France, Italy, and Germany."

THE BROMIDE SLEEP: A NEW DEPARTURE IN THE TREATMENT OF ACUTE MANIA.

By NEIL MACLEOD, M.D.,
Shanghai.

To have to consign a case of acute mania to a padded room in a gaol, and to have to treat it there without skilled attendants, there being no proper provision for such a case within some thousands of miles of Shanghai, naturally reconciles one to adopt an alternative which may appear, or actually be, heroic, but which promises to deal with the case successfully in the patient's own house.

I have not met with anyone who has seen the condition which I have termed "the bromide sleep" apart from those cases in which I have induced it, nor can I find any reference to such a state intentionally produced as a therapeutic measure. An approach to it has been made in the treatment of epilepsy, but neither have such doses of bromide been given, nor such a condition produced as I have described in recent papers¹ on the treatment of various drug habits, etc. By "the bromide sleep" I mean a condition lasting from five to nine days, in which the subject sleeps day and night, and from which he cannot be roused. He cannot walk, stand, sit, speak, or carry on any of the higher cerebral functions. If left to himself he will not feed or drink; indeed, he cannot even ask for food or drink, being unconscious of these needs, but can be sufficiently nourished with milk during that time. He will pass urine and stools in bed if left to himself, but can be prevented from doing either by timely suggestion of these needs on being placed on a commode and held there for a few minutes every six hours. The loudest sound, the strongest light will not disturb him. During this period the higher nerve centres are rested to an extent so complete as cannot be attained in any other way, so far as I am aware. Following this sleep is a gradual recovery of the powers of locomotion, speech, thought, etc., the progress being daily visible, lasting about a fortnight—in all about twenty-one to twenty-four days. This fortnight is also a period of comparative rest, there being a gradual awakening of mental power and a passage from a disordered to an ordered state as regards that function. This bromide sleep I have produced nine times, and, so far as I can judge, safely and with advantage in the treatment of the various maladies for which I have used it, with one exception. This was a case of morphine and cocaine habit, in which a double pneumonia supervened and led to a fatal result.² This case was the first of an epidemic of pneumonia, numbering more cases and deaths in a few months than had occurred in the previous twenty-one years of my residence in Shanghai. Apart from this case, and even here before the intercurrent pneumonia, I have not seen any interference with respiratory or circulatory function sufficient to give rise to anxiety. With perseverance, care, and a tumblerful of milk every two hours to seven tumblers, little loss of weight need occur except from wasting of muscles. After recovery in no instance has any indication of interference with nervous function been observed.

Manifestly, more cases will have to be observed before it is possible to estimate the full advantage and danger, if any, of this sleep, and as, in the natural course of things, I shall have but few opportunities here of seeing many such cases, I

present the subject at what may be regarded as a premature stage, with the expectation that others may put the matter to the test.

The fully developed sleep is a rather alarming condition to anyone seeing it for the first time, and especially so to the friends of the patient. They should be forewarned of the state and its duration. For two or three days there may be difficulty in feeding, when swallowing is somewhat slow, and milk should be given by the spoon, the lower jaw being pushed downward a little as the milk is being poured into the mouth, the head being held half between the upright and the lying down positions, and closure of the mouth by pressure on the chin, accelerating and aiding the act of swallowing. The best method of giving the bromide is probably yet to be worked out, but, so far, I am inclined to give it only in the daytime, two drachms in a half tumbler of water every two hours until an ounce is given the first day. On the second day a similar amount is given in the same way, and, as will be seen in the case described later, this may suffice to effect the result desired which, it should be remembered, is not at its deepest till the fourth or fifth day—that is, more than twenty-four hours after the administration of the last dose. Possibly it may be better to give a less amount in larger doses more quickly, say, on one day. I must emphasise the fact that the full effect of the drug is not manifest for at least twenty-four hours after the administration of the last dose, and when it is developed that effect may continue for several days. A safe rule, therefore, is to cease administration of the bromide for twenty-four hours when drowsiness is so profound that the patient cannot be roused, or if when roused talk is incoherent. If the sleep continues or becomes deeper no more bromide will be needed.

Precautions should be taken to protect the patient from cold by proper bed and night clothes, the room should be kept at a proper temperature, and he should be prevented from injuring himself by falling as he is emerging from the sleep, when he is incapable of taking proper care of himself.

A short sketch of the circumstances under which I first made acquaintance with this effect of bromide, and subsequently made use of it, may interest those who have not had the opportunity of reading what I have already written on the subject: Early in 1897 a neurasthenic lady, addicted to the morphine habit for nine years, by accident had administered to her 2½ ounces of sodium bromide in between two and three days, resulting in the bromide sleep described above, with the result that when she got over the effect of the bromide she had no craving for morphine, and had ceased to suffer from the various symptoms which had led to its use. Within a few months thereafter, a pilot, a morphine habitué, also addicted to alcoholic excess, was sent to me and expressed himself as willing to try the effect of the bromide sleep, the condition having been fully described to him, its risks being, so to speak, unknown. In this case no suffering was experienced during deprivation, and the morphine and alcoholic cravings had both disappeared on recovery from the sleep. A third time I induced the sleep in a condition of acute mania to expedite the transport of the patient from the interior of Japan to Shanghai, without the use of constraint, and to get rid of the excitement associated with travel, in the hope also of benefit to the nervous condition, which hope was completely fulfilled. The fourth case was a Chinaman, a chloral habitué of two years' standing, who placed himself in my hands with the result of loss of the craving for chloral without suffering during deprivation. In the fifth case, the bromide sleep succeeded in stopping uncontrollable vomiting in a neurasthenic lady with benefit to the neurasthenia from thence to nervous functions. Sixthly, a morphine and cocaine maniac after the sleep lost the craving for both drugs, having escaped the suffering of deprivation, with great improvement to the general health brought to a low ebb by the drug habits. The seventh case, a lady, was relieved of a nine years' morphine habit, also without suffering from deprivation, spread over three days, with improvement to the general health. The eighth case, a doctor, addicted to morphine and cocaine, desired to be relieved of the drug habits without the suffering of deprivation of which he had had two previous experiences. On the seventh day of treatment he succumbed to an attack of double pneumonia which supervened.

The success attending this treatment in these cases led me

to have recourse to it in the next, the ninth, case, one of acute mania, after an experience of forty-eight hours of incessant exaltation and excitement, with the certainty of obtaining absolute rest, sleep and a cutting off of all surroundings more completely than is possible in the best regulated asylum and providing at the same time against the possibility of injury to self or others.

CASE VIII.

A married lady, aged 49, two years past the menopause, early in 1897 received by wire unexpected news of a family affliction, giving rise to a great nervous shock. This was followed by signs of nervous disturbance, culminating, in the hot weather of that year, in an attack of acute mania (referred to in a paper published in the April 15th, 1899, issue of the BRITISH MEDICAL JOURNAL, at page 898). Since September, 1897, she has appeared to be quite well, though less able for her usual exertion, having been previously a hard rider to hounds. In March last another shock gave rise to slight signs of nervous disturbance, and in the end of June, again on the approach of hot weather, sleeplessness, headache, loss of appetite, needed an attack of watery diarrhoea to cause great prostration, slowness of speech, forgetfulness, use of wrong words, irritability, passing into a state of incoherence, exaltation, and incessant speech activity with delusions of fear in the night, and the desire to escape from the house, neither it nor its inmates being recognised. This was the condition on June 30th and July 1st, during which time she was in charge of a trained nurse.

First Day of Treatment.—No drug of any kind having been taken for a week, and milk only for some days, the diarrhoea having ceased, bromide of sodium in 2-drachm doses were given in half a tumbler of water at 8.30 A.M., 10.30 A.M., 12.30 P.M., and 3.30 P.M., that is one ounce in all. Milk every two hours to 7 tumblers, the same quantity being given daily until otherwise noted. The patient wandered about the house talking nonsense incessantly nearly the whole day. Fell asleep at 9 P.M.

Second Day.—Slept till 7 A.M. without waking, and also during part of the forenoon. Condition as yesterday, full of delusions expressed quite distinctly. Somewhat shaky and feeble on foot. Bromide given in 2-drachm doses at 8.30 A.M., 1.30 P.M., 3.30 P.M., and 6 P.M. (last dose). Slept in the afternoon. Plantar reflex active, patellar reflex exaggerated as it was before bromide was given.

Third Day.—Slept all night, muttering when roused with an occasional distinctly uttered word, swallowing from the cup with difficulty; cannot stand or walk without help.

Fourth Day.—Cannot be roused; no speech, muttering or otherwise; swallows from the cup with great difficulty. Muscles of the neck twitching when any of them are put on the stretch.

Fifth Day.—Cannot be roused; cannot drink from the cup, fed with a spoon. An occasional cough, clears the throat with difficulty. Breathing shallow and quickened. Temperature not over 99°.

Sixth and Seventh Days.—No cough; condition as on the fifth day.

Eighth Day.—Has evidently caught cold; has been sleeping day and night under the punkah. Temperature, not previously over 99°, 100° at 2 P.M.; pulse also quickened to 100. Swallowing better; breathing shallow and quickened at times, quiet and natural at other times. 9.30 P.M. Temperature in bowel 101.2°; face a little flushed; plantar reflex confined to very slight flexion of the toes; patellar reflex exaggerated.

Ninth Day.—12.30 A.M. Bowel temperature 99.4°; opens the eyes on being called and makes an inarticulate noise. 12.20 P.M. Temperature 98.4° in bowel; perceptibly more easily roused; plantar reflex slowed, but stronger, the whole limb being drawn away when the tickling of the sole is continued, not done two days before; fails to understand the order to put out the tongue, but does so on seeing it done. Temperature 99°.

Tenth Day.—Coughing a little in the night; tries to put out the tongue on being ordered; swallows and sits up better; can stand alone. Highest temperature 99.4°.

Eleventh Day.—Still very sleepy; fails to put out the tongue when asked to do so, muttering inarticulately, moving more forcibly, eyes open while feeding from the spoon; tongue hitherto foul, now cleaning. Temperature 100.2°.

Twelfth Day.—Crying; trying to blow the nose; now puts out the tongue, which is quite clean; a few distinctly-uttered words followed by inarticulate muttering; this is noticed nearly every time she speaks. Temperature 99.4°.

Thirteenth Day.—A restless night for the first time, talking quietly, no excitement; the eyes open spontaneously, smiles in response to smiles, chattering nonsense fairly distinctly, feeding from the cup again, walks with assistance; hands very shaky; tea, bread, and butter in the afternoon; trying to get out of bed.

Fourteenth Day.—Does not recognise anyone yet; talking quietly, but indistinctly all the time she is awake; hand grasp feeble.

Fifteenth Day.—The first few words of sentences are quite distinct and sensible, the later ones being less distinct and apparently nonsense.

Sixteenth Day.—A bad night, talking and restless; slept in the early part of the day and from 11 P.M., 7½ hours.

Seventeenth Day.—Short sentences quite sensible and to the point, longer ones still ending in chatter.

Eighteenth Day.—A bad night, not excited, but slept little, talking quietly; eating ordinary meals, sitting at table; coherence of talk good in the morning, defective in the afternoon.

Nineteenth Day.—Slept fairly well; short sentences in conversation quite sensible; can read a few words, but cannot hold the book, wrist drop; memory very fair.

Twentieth Day.—Slept badly; a typhoon blowing; very quiet all day; occasional incoherence in the afternoon. It is remarkable how little noise of any kind seems to disturb her, hearing being quite natural.

Twenty-first Day.—Good night; delusions still apparent, though manifestly less and not at any time fixed.

Twenty-second Day.—A bad night; manner quite natural, rather muddled about the identity and locality of the house (of recent occupation).

Twenty-third Day.—A good night; the faintest trace of mental disturb-

ance. From this day no departure from the normal mental state could be detected; walking in the garden and downstairs at meals as usual; easily tired.

Note.—The alternate good and bad nights refer to sleep only, the alternation being a marked feature in several of the previous cases dealt with. A loss of one night's rest during the period of recovery need be looked on without anxiety.

CASE IX.

On August 18th, 1899, I saw, in consultation with Dr. Reid, Shanghai, a married woman, aged 30, who had been nursing an 8 months' old child till the 13th. She was suffering from acute delirious mania, which had then lasted seven days, was refusing food and being fed by the bowel, under forcible restraint to prevent injury to herself, had had only one night's sleep in six, and was occupied incessantly in noisily talking, singing, and on the move as far as the restraint allowed. By my advice, on the 18th 7 drachms of sodium bromide were given in three doses before 7 P.M. by a catheter through the nose. That day she had had 30 gr. chloral hydrate and 1 drachm bromide.

Second Day.—She slept the greater part of the night, but still refused food, was restless and talkative all day; 7 drachms of bromide were given before 4 P.M. by the nose.

Third Day.—She slept all night; talked quietly through the day, no longer needing restraint; took some milk by the mouth and ate a little bread; 7½ drachms bromide were given before 4 P.M.

Fourth Day.—Slept all night, and could not be roused to wakefulness; she puts out the tongue on being asked to do so, and is muttering indistinctly; before 9 A.M. she had drunk 16 ounces of milk readily; at 3 P.M. temperature 105°, pulse 100. The left parotid region was much swollen and the left breast when touched caused her to wince; a set of false teeth were removed from the mouth, which was found in such a state as to evidently account for the swelling on the left side of the head; the mouth was ordered to be regularly cleansed with boric acid solution.

Fifth Day.—She cannot be roused, and takes no notice of the order to put out her tongue. Temperature 104° to 105° all day, except when sponged. Evident cellulitis of the left carotid, submaxillary, and neighbouring regions. She takes abundance of milk.

Sixth Day.—Still asleep; 7 A.M., temperature 105°, pulse good. Swelling somewhat less; the mouth looks cleaner. No disturbance of respiration or cough; no physical signs of abnormal character in the chest. Temperature at 4 P.M. 108°. Died at 8 P.M.

No post-mortem examination was made. Death was obviously due to septic poisoning starting in the condition of the mouth, overlooked from the fact that she had had no food by mouth for over a week, and that the false teeth had been previously removed, but replaced by patient about the time the bromide treatment commenced.

In this case within eight hours of the commencement of administration of the bromide sound sleep was procured; in thirty-six hours the incessant excitement of emotional, mental, and motor nerve centres was quieted, and restraint no longer needed; in sixty hours complete rest of these centres was established, and food was no longer refused. Had the septic mischief not supervened, these results should have tended towards recovery of a condition difficult to deal with in private, and serious in proportion to the duration of the exhausting manifestations.

By removal to an asylum, thus cutting off impressions from the surroundings to which a patient is accustomed, and in which an acute mania may have arisen, it is hoped that the receptive side of the nervous system will be rested to some extent. It is also hoped by this cutting off of accustomed stimuli that some rest will be secured for the regulative and executive side of that system, in which in all probability the greatest part of the disturbance is taking place, and more especially in its relation not to direct impressions, but to registered ones—memory. The only means of procuring complete rest for these higher parts of the nervous system, as well as for lower centres, is through sleep, natural and artificial. It will be conceded almost on every hand that the production of artificial sleep hitherto by hypnotics leaves much to be desired in the presence of states like acute mania. In the bromide sleep there is the certainty of rest to both receptive and executive sides of the nervous system, and also of the region concerned with memory, a rest so complete and prolonged as can be obtained by no other means as safely. If future experience goes to show, as I venture to hope it will do, that this bromide sleep can be induced without or with little danger, it ought to prove a powerful and effective means of dealing with all maladies of the nervous system in the treatment of which there is need for deep sleep, and a profound and prolonged rest of the higher centres.

REFERENCES.

- ¹ BRITISH MEDICAL JOURNAL, July 10th, 1897, p. 76; and April 15th, 1899, p. 896. ² *Ibid.*, p. 897.

A CASE IN WHICH 300 GRAINS OF SULPHONAL WERE TAKEN IN TWO DOSES.

By R. PERCY SMITH, M.D., F.R.C.P.,
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In the BRITISH MEDICAL JOURNAL for November 4th, 1899, in a paper by Dr. A. H. Bampton, on The Toxic Cumulative

Effect of Sulphonal and Trional, the following passage occurs: "It is lamentable that such powerful drugs as sulphonal and antipyrin in bottlesful are allowed to be sold to the public for secret self-drugging purposes." The matter was also referred to in an editorial article in the JOURNAL of December 9th. The following case, which recently came under my notice, is of importance with reference to the question of the easy way in which patients can obtain large doses of drugs which, though harmless in small doses, and under proper supervision, yet are toxic if taken in sufficient quantities.

On April 27th, 1899, I was asked to see and if necessary sign a medical certificate of unsoundness of mind in the case of a lady suffering from melancholia. Depression had been intermittently present since the birth of her third child some two years before, and she had already been under care in two asylums, with only partial improvement. Two days before I saw her she had taken 150 grains of sulphonal, which she had obtained from a chemist's in the form of six powders of 25 grains each. Her husband, a medical man, on learning this, gave her apomorphine hypodermically, and a purgative by the mouth, and these drugs acting efficiently, no toxic effects of the sulphonal followed. She had, however, another 150 grains, which she had obtained in the same way, and had secreted in her stocking, and this she took the day before I saw her. Resort was again had to emetics and purgatives, and nothing but drowsiness resulted from the large dose. She was very depressed; thought her soul was lost, and that God told her so, and had visions of the "dead and dying." She said she had taken the two enormous doses of sulphonal for "no reason." She acknowledged that she did not want to live, but said she had merely taken the sulphonal to produce sleep. Her husband told me that she had often taken poisonous doses of drugs, and on one occasion took lin. chloroformi. At one time also she suffered from hæmorrhage from taking sulphonal. There was no difficulty in certifying her as insane.

On inquiry at the chemist's where she said she had obtained the drug as to whether it was possible for a patient to obtain such a quantity without a prescription, I was assured that there was no difficulty about the matter, and that no suspicion would be excited by a patient asking for six powders of 25 gr. each. Moreover there is no difficulty in buying bottles containing tabloids of 5 gr. each, which would easily mount up to any dose a patient might think fit to take. Fortunately in this case no evil results followed, but it is quite conceivable that the case might have ended very differently, and although the toxic effects of sulphonal are usually produced slowly, and as the result of taking the drug in ordinary doses for a long time, yet it would appear that there ought to be some restriction on the possibility of patients purchasing large amounts.

It is worthy of note that in this case the drug was not obtained in the form of a proprietary article, but in the form of a standard B.P. preparation without a prescription.

A CRITICISM OF THE MECHANICAL HYPOTHESIS OF THE ORIGIN OF CARCINOMA,

WITH A DESCRIPTION OF A SPECIMEN OF "SPONTANEOUS" CARCINOMA OF THE UTERUS IN THE RABBIT.*

By SAMUEL G. SHATTOCK, F.R.C.S.,

Pathological Curator of the Museum, Royal College of Surgeons.

THE specimen which I exhibit is a highly-marked one of carcinoma in the rabbit, and was from an animal upon which no kind of experiment had been performed. Both uteri are the seats of multiple and extensive tumours. Histologically the growths are of the columnar-celled kind, in places papilliferous.

Between the growths the mucosa is nearly everywhere raised in complex papillary processes, and from such areas the growth of the carcinoma can readily be traced. The mode of formation exactly resembles that of the columnar-celled carcinomata of the rectum, many of which are also papilliferous. There were a certain number of disseminated peritoneal growths.

The interest of this specimen relates almost exclusively to the bearing it has upon the experiment put on record by Dr. Lambert Lack in the *Transactions of the Jenner Institute*, vol. ii, and the *Journal of Pathology*, August, 1899.

The experiment was carried out by laying open the ovaries of a rabbit, scraping the surfaces, and allowing the milky juice containing free epithelial cells to diffuse into the peritoneal cavity, the laparotomy wound being, of course, afterwards closed. The particular animal remained well for nearly

* Read at the meeting of the Pathological Society of London, January 16th.