(4.) That they cause symptoms of the gravest nature.

(5.) That their prognosis is important both for treatment and prognosis, since on the one hand their presence renders a fatal issue almost certain, and on the other renders the operation of tracheotomy useless and needless.

(6.) That the polypoid-shaped clots are often the proximate cause of the serious state of the patient, and not the result of that condition.

(7.) That death may occur suddenly, immediately after its formation, or after a stage of anxiety and of anguish, lasting for a longer or shorter time.

RECENT PROGRESS IN INSANE ASYLUM MANAGEMENT AND CARE OF THE INSANE.

BY WALTER CHANNING, M. D.

AN ENGLISH ASYLUM.

THE Twenty-Eighth Report of the Derbyshire County Lunatic Asylum is one of a good class of English reports, and worthy of mention in a review of literature. The asylum contained, at the end of the year 1879, 414 patients; with this large number the superintendent, Dr. J. Murray Lindsay, was able to do the usual routine work of supervising and building, and, in addition, some excellent scientific work. The number of admissions was large (180), and yet he received the assistance of only one medical officer. It is hard to understand how he could accomplish so much, unless the steward and others managed more of the asylum affairs than is common in this country. The asylum contained the large number of 74 epileptics, and, what is unusual in America, several idiot children. Dr. Lindsay states that hereditary predisposition was ascertained in nearly twenty-five per cent. of the admissions, but this per cent. does not, in Dr. Lindsay's opinion, represent to the full extent the part heredity plays in the causation of insanity. Intemperance was the assigned cause in eighteen per cent. of the cases.

The percentage of recoveries was forty-five on all admissions; forty-six males recovered to thirty-five females, which is regarded as a remarkable feature of the year, and certainly still more remarkable in contrast with our asylums, the proportion being quite as great in favor of the females. The same unusual feature presents itself in the preponderance of deaths in the females. The general mortality is so high that it at once arrests attention, there having been 70 deaths out of a total of 602 treated. Comparing these statistics with those of other hospitals, we find that at Danvers of 875 under treatment 63 died; at Taunton of 752, 48 died; at Worcester of 656, 36 died; at Northampton of 535, 23 died. At the California State Lunatic Asylum, the twenty-eighth annual report of which has just come to hand, there were treated during the year 1241 patients, and of these 72 died. While the Danvers percentage approaches somewhat nearly that of the Derbyshire Asylum, those of the other hospitals are little more than half. The asylum is about six years older than the Northampton Hospital; this would ensure more deaths from old age and chronic diseases, but on the whole a smaller mortality than if it received a greater number of acute cases. We find that there are nearly three times as many deaths at

the former as at the latter, though treating only sixty-five more patients a year. One third of the deaths were caused by paralysis and consumption.

It is pleasant to turn to the scientific work performed at this asylum. The American reader will be struck by the fact that 65 autopsies were made out of 70 deaths! In this country, owing to public feeling and professional inertia, the number would not be more than one third as great. Under the heading of Medical Notes and Statistics a number of interesting experiments were made. Trials of sumbul, potassium bromide, zinc, arsenic, amyl nitrite, and nitro-glycerine in cases of epilepsy were made. The number of cases was forty, many of an unpromising nature, and all accompanied by mental alienation. Sumbul, arsenic, and zinc were found, on the whole, to produce no effect in diminishing the frequency or severity of the fits. Amyl nitrite was found of benefit in a few cases, particularly in well-marked anæmic cases, where potassium bromide was not as useful. The amyl nitrite was prescribed in half to three minim doses three times daily, in an ounce of water. "A trial was made of nitro-glycerine, on the suggestion of Crichton Browne, of a one per cent. solution in alcohol. On the whole it did little or no good, and even made some cases worse." Potassium bromide alone was found to be of certain and rapid benefit. It is stated that there were several deaths in the epileptic status, and these led to the trial of chloroform for the purpose of preventing the recurring convulsions and deepening coma. In the case reported it was successful.

In the sixty-five autopsies made during the year the condition of the osseous system, with special reference to the fragile, brittle, or softened condition of the ribs and sternum, was carefully noted as follows: "The ribs and sternum were noted as abnormally fragile and weak in eight males and sixteen females, — in some cases so weak and soft as to break or bend (green-stick fracture) with very slight pressure. The influence of the nervous system over bone-nutrition and the frequency of a diseased condition of the osseous in the insane, as bearing upon the liability of fracture, are very important in a medico-legal point of view, for broken ribs do occasionally occur in asylums, and it is popularly supposed that extreme violence on the part of attendants or others is always necessary to produce them."

Brain weights had been taken during eight years in 420 cases. The average weight of the brain in 250 male lunatics was 47½ ounces, about two ounces less than the healthy average, according to Quain. The average weight of the female brain was 43½ ounces, or one quarter of an ounce less than the healthy brain. The largest brain was that of a general paralytic, and weighed 60 ounces, and the smallest was that of a female epileptic idiot, and weighed 25 ounces. These results accord with those of Dr. Boyd, Dr. Thurnam, and Mr. Crochley Clapham. Dr. Crichton Browne finds a greater difference in the male and female brain, and agrees with Broca that the smaller size of the female brain depends as much on her intellectual as on her physical inferiority. Dr. Lindsay finds the left hemisphere the heavier in the proportion of five to four. Brown-Séquard and Dr. Boyd agree with this view, but Dr. Crichton Browne, Dr. Thurnam, and Prof. Wagner, find the right the heavier.

I cannot close this long review without referring to the cost of the tobacco, beer, and wine used at this

asylum. The cost of these articles so far exceeds that of our American insane hospitals that one is struck by the contrast. The tobacco and snuff bill for the year was £93. The cost of the beer, ale, and wine £666 16s. 6d., or only £80 13s. 6d. less than the cost of the butter, cheese, bacon, and eggs. In the list of provisions meats come first, flour second, and tobacco, beer, ale, and wine third. In this country but little beer or wine is used, brandy and whisky being the staple articles. These are generally put down under the head of "drugs" or "medical supplies." Looking at the Massachusetts hospital reports for 1879 we find no mention of liquors or wines, but the total cost of medical stores in the five hospitals was only \$5265.03, or about £1053. Here it must be stated that "wines, spirits, and porter" are, in the Derbyshire Asylum report, called "extras for the sick." Adding the cost of these to the above cost of "ale, beer, and wine" found under the heading of provisions, we get a grand total of £795 4s. 6d. Adding still further the cost of "drugs and instruments," which is £105 2s. 7d., we find that the difference between the cost of medical stores and stimulants at an English asylum having in the course of a year 602 patients under treatment is within £150, in round numbers, of the cost of the same articles for 3240 patients in Massachusetts. If we leave New England and go toward the West, we find stimulants more used; for instance, at the Northern Hospital for the Insane at Winnebago, Wisconsin, their whisky, wine, and gin bill, which comes in under the head of "drugs and medical supplies," amounted in 1879 to \$1226.70 for a total of 757 patients.

CURABILITY OF INSANITY.

Dr. D. Hack Tuke, of London, has an important article on Tabulating Recoveries from Insanity, in the *Journal of Mental Science* for October, 1880. He reaffirms the conclusions arrived at by Dr. Earle, that the number of recoveries reported in asylum statistics is far from correct, and gives rise to much misconception as to the actual number of persons who recover from insanity. Dr. Tuke states that he does not object to superintendents making as good a showing as possible; repeated cures of the same patient often show great skill of treatment, but some better system of figures is necessary, as the public are now made to believe that "100 recoveries represent 100 persons enjoying the use of their reason, instead of, in too many cases, oscillating between the world and the asylum. Then in their ignorance of the tendency to the recurrence of insanity, they are astonished at the ever-increasing demands for new asylums and the conclusion, out of all proportion to the fact, that there has been an increase of insanity." Speaking in another place of the great number of relapses, Dr. Tuke says: "Taking the recoveries from the first attack at the York Retreat, up to a certain date, as many as sixty-five per cent. relapsed, some of course recovering again. The cures at first were fifty-three per cent.; then after deducting relapses they were only eighteen per cent., while allowing for recures the latter number was raised to eighty per cent."

Dr. Earle, in his annual report of the State Lunatic Hospital at Northampton for 1880, again devotes considerable space to the subject of the curability of insanity. As an illustration of the mistake which may result by drawing inferences from statistics, under the head of "instructive statistics" he gives some re-

markable information regarding 118 cases of insanity which have been treated in American hospitals, and the statistics of which have been published in the annual reports of those institutions. Dr. Earle says: "If Dr. Todd's well-known group of 23 cases at the Hartford Retreat, and Dr. Galt's group of 13 cases at Williamsburg, Va., were sufficient in number to justify the inferences in regard to curability which were drawn from them, and which were largely influential in establishing a prevailing belief, then may we safely be permitted to derive some inferences from this group, which is more than three times as numerous as both of them." Four tables Dr. Earle gives, one being *age on admission*; one, *age on first admission*; one, *occupation*; and one, *results of treatment*. We find from these tables that insanity prevails only among females; that under forty-five years it is very rare, but prevails to its greatest extent among those of from forty-five to sixty years; that first admissions occur oftenest from forty-one to forty-five years, and least frequently from twenty-six to thirty years; that of all females the wives of manufacturers are the most prone to become insane; that insanity in females is one of the most curable of all diseases, 102 out of 118 recovering, or 86.44 per cent.; that of the 118 patients only one died, or eighty-four one hundredths of one per cent. We learn further that all these patients were married, the inference of which would be that mental disorders are apparently unknown among unmarried women. The explanation of these wonderful statistics is that these 118 cases of insanity relate to three persons, all of the married women! These three women were admitted to hospitals 118 times and discharged as recovered 102 times. One of them died insane in a hospital; another died insane at home; and the third at the age of seventy-five years has entered an almshouse.

RESTRAINT.

Dr. Brosius, editor of the *Irrenfreund*, in numbers 2, 3, and 4 for 1880, discusses fairly and candidly the question of non-restraint. He strongly urges the use of seclusion as a substitute for restraint. He proposes large, comfortable seclusion rooms (*zellen*), with which should be connected large yards, in which the secluded patients could be allowed to wander freely. As a further means of non-restraint there should be a set of perfectly trained attendants, who should, "*leidenschaftlos mit Entschiedenheit und Klugheit die ärztlichen Anordnungen ausführen.*"

After enumerating the various forms of disease where seclusion will be beneficial, Dr. Brosius says that it should not be continued too long. The patient forms bad habits, and sometimes acquires delusions which can only be broken up by removing him from the seclusion. He can then be carried back to the other patients, or kept apart in the corridor connected with his room, which should be pleasantly furnished and entertained by his attendant. In certain cases, however, restraint will be necessary; "even Connolly himself speaks of exceptional cases." Particularly when the patient shows a determination to harm himself by injuring his flesh, picking the finger nails, pulling out the hair, etc., Dr. Brosius recommends the occasional use of gloves. He criticises those persons who use gloves and yet do not call them restraint; it would be more proper to say they could not get along without restraint. "In cases of chronic propensity to self-injury, manual restraint continued

for months is not possible, and it would be a much worse and more unbearable form of restraint than gloves. The patient bears these with comfort, goes where he will, and has free motion, whereas the attendant who holds him is a constant burden, who irritates him, and is irritated by him, and with whom he creates so much confusion that it is better for him to remain away from the other patients, among whom his gloves would not have seemed at all strange." As a very important means of keeping patients quiet, Dr. Brosius dwells at some length on good food. "The kitchen and the wine cellar are of much greater importance and influence than the apothecary shop. Liberal diet and a fine strong wine are on the whole better and a more adaptable form of quieting medicine to the system than the various narcotics, such as chloral, potassium, bromide," etc.

In the *Centralblatt für Psychiatrie* for January, 1881, Dr. Rabow reviews a paper written by Billod and presented at the recent International Congress at Amsterdam, on Restraint and Non-Restraint. Billod says the English and French hold much the same views on the subject; but restraint—especially the camisole—is often employed in France. In Holland, also, but very little restraint is used. Billod accounts for this by the different characters of the different countries. Then, too, in England and Holland food, liquors, or beers and tobacco, are extensively used. It is a well-known fact that food is one of the most important means of producing quiet. In England, too, the fear and respect in which state officials are held exerts a strong influence in promoting quiet.

Dr. F. Pritchard Davis, superintendent of the Kent County Asylum, writes a short article in the *Journal of Mental Science* for January, 1881, on the subject of Chemical Restraint and Alcohol. He believes that a change in the use of chemical restraint is following mechanical restraint. In the asylum over which Dr. Davis presides there are over 1200 patients, and among them cases of every variety of insanity, but for fifteen months no quieting medicine at all has been used. The results have been so good that probably none will be used in the future. Part of this success is probably owing to the disuse of alcohol, none having been used except with the very old and feeble. In speaking of the use of drugs Dr. Davis goes so far as to compare the use of hyosciamine to that of the garrotte, and asks if one plan of treatment would not be as admissible as the other. Chloral is anything but an unmixed blessing and has probably thrown back the rational treatment of insanity several years.

CRIMINAL LUNACY.

In the January number of the *Journal of Mental Science* there is a Review, continued from the October number, of papers and discussions on this subject presented at the International Congress of Mental Medicine. Dr. Auzouy discusses the risk of discharging homicidal and epileptic criminal lunatics. He recommends that criminal lunatics should be tried like ordinary lunatics, and sentenced and confined in special asylums for a term at least equal to that of the imprisonment they would have suffered if responsible. Dr. Dagonet refers to the frequency of epilepsy in criminals, and regards its occurrence as of the greatest importance. He thinks that so-called criminal lunatics ought not to be any more than any other lunatics subjected to constant confinement, merely because they

have committed a criminal act. Their having been dangerous once does not necessarily imply that they would be so a second time. Dr. Lunier does not think there is as much difference between those who became insane before commitment and those who became insane in prison as might be thought.¹ He thinks that one quarter, at least, of the convicts found insane in the prisons were so at the time of being condemned.

He thinks it improper to commit criminal lunatics to ordinary asylums; they should be treated in special asylums, but convict lunatics he considers it more convenient to leave under the care of the penitentiary administration in a special building.

The reviewer, in considering the various papers, thinks Dr. Dagonet expresses too great confidence in the freedom from second attacks. Particularly should we guard against epileptics (in the reporter's experience the most dangerous class of insane criminals). The reviewer says that "rather than admit that chances of peril (from epileptics) are so improbable, we always, on the contrary, believe, with Delasiauve, that "on passing by an epileptic we elbow one who might be an assassin." So, also, is it in the highest degree necessary to be on the lookout for the maniacs who "exhibit no intellectual disorder to indicate a threatening danger of the outbreak of fierce violence."

GHEEL.

Under the title of The Town of Gheel in Belgium and its Insane, Dr. William J. Morton writes an instructive as well as a fresh paper in the *Journal of Nervous and Mental Diseases* for January, 1881. He visited Gheel last summer, and made a careful examination, and presents details which have not been so thoroughly gone into by previous writers. Our old-fashioned idea of Gheel was a rather small town, composed chiefly of peasants, in which the insane were farmed out under little medical supervision; if violent, fastened with chains, and generally largely at the mercy of the peasants. The case now, however, is different, and, as bearing on the question of provision for the insane, is worthy of notice in this report.

Gheel is twenty-four miles from Antwerp, and is easily reached in one hour. Its inhabitants are Flemands intermixed with Germans and Gauls. The population of the town is 12,000, chiefly centered in the town, though there are some outlying hamlets. The insane population has steadily increased, being, in 1868 1035, in 1880 about 1600; 1400 of these are Belgians, the rest Hollanders, Germans, French, and English. Two hundred are paying patients. All cases not of a violent or dangerous character are received. Up to 1851 there was no organized medical service. At that time Gheel was placed under the control of the central government. The administration rests in the hands of a "superior commission;" added to this commission there is a secretary. He is, it might be said, the steward or clerk, and makes reports, conducts the correspondence, receives and disburses funds for the patients' maintenance, and has charge of the books. The real working portion of the commission is its permanent committee, composed of five members.

¹ The reporter wishes to call special attention to this statement as being contrary to what is often asserted by those who have not had large numbers of both classes under treatment. Those who have, fully endorse what Dr. Lunier says.

All persons desiring to keep patients must be registered on the list authorized by the permanent committee. Those receiving paying patients are termed "hosts," and those receiving paupers "nourriciers." Both classes must be of good moral character, and cannot receive more than two patients. The size of the room, the quantity and quality of the food, the ventilation, clothing, bedding, and furniture are all definitely prescribed. Care is taken to place patients in families in like social circumstances, and the labor of patients is carefully regulated. To guard against abuse there are "section guards," whose duty it is to visit the various patients continually and unexpectedly, and make daily reports.

The medical service is under the charge of a "medical inspector;" at present Dr. Peeters, successor of Dr. Bulkens. He is saved from attending to matters of financial detail by the secretary.¹ His headquarters are at the infirmary, to be shortly mentioned. He is assisted by three physicians, who have charge of the three sections into which the town is divided. These physicians reside in these sections, and engage in general practice. Each one must visit the curables at least once a week, and the incurables once a month, and both classes oftener if needs be. The physician's visit is entered in a book kept by the nourricier or host, and he makes a monthly report to the inspector. The infirmary is like an ordinary asylum. Its purpose is to afford the usual hospital treatment to patients attacked with incidental diseases, to care for the very infirm, and to take brief charge of cases becoming suddenly excited. But the patient's stay is expected to be temporary, and from the small number under treatment (thirty-seven) it must be so.

A peculiar classification is made of the insane at Gheel, which serves as a basis of payment to the nourriciers or guardians. There is first, the dirty class; second, the half dirty class; and third, the clean class (*gateux*, *semi-gateux*, and *propres*). For the first class about nineteen cents per day is paid; for the second, eighteen, and for the third sixteen. Some private patients pay six hundred dollars yearly.

Escapes are very rare, ranging from only seven to twelve annually. Acts of violence are also rare, only three being on record, and only one of these a homicide, in 1840.

There have been three suicides since 1875. In a half century scarce a half dozen pregnancies have occurred.²

Dr. Morton found only one patient in restraint in the form of a camisole, the use of which had been sanctioned by a section physician.

In 1879 three hundred and thirteen patients were admitted, of whom seventy-one were incurable. The proportion of cures from 1853-70 was twenty-four per cent. In estimating cures, the large number of chronic patients received must be borne in mind.

In speaking of the feasibility of the Gheel system in America, Dr. Morton truly says, "the Gheel of today is the product of tradition, superstition, religion, and long custom. Gheel was not born fully equipped for its service, it grew. . . . Gheel in its entirety is probably an ideal that can never be produced in any other country."

¹ Is he? All American insane hospitals have stewards and clerks, but the superintendents still have numberless business details to look after.

² *Lettres Médicales sur Gheel*, etc. J. H. Peeters. Gheel. 1879.

Hospital Practice and Clinical Memoranda.

SOME SURGICAL CASES AT ST. JOHN'S HOSPITAL.¹

SERVICE OF JOHN H. GILMAN, M. D., LOWELL.

FRACTURE OF FRONTAL BONE OF SKULL NEAR JUNCTION WITH RIGHT PARIETAL, FRACTURE OF RIGHT RADIUS AND ULNA AT MIDDLE THIRD AND AT WRIST; COMPOUND FRACTURE OF LEFT RADIUS AND ULNA AN INCH AND A QUARTER ABOVE WRIST JOINT. RECOVERY.

October 30, 1880. J. E. J., a lad fourteen years of age, during the dinner-hour of the operatives of the Merrimack Mills, with a few boys about his own age, interested himself in the new mill in process of construction in the yard, more especially in an apparatus for raising bricks and mortar to the upper story. To the end of the long rope, that aloft ran over a pulley, a stick was fastened which J. E. J. got astride, and was drawn up forty-eight feet, when the stick broke, precipitating the unfortunate boy to the ground, striking on his head and hands. Two hours after the accident he was brought to St. John's Hospital in an insensible condition from concussion of the brain, and presenting altogether a hideous appearance, with bloody visage, black swollen eyelids, gaping wounds, and broken limbs. The fractures of the right forearm were reduced, and appropriate splints applied; but it was found quite impossible to reduce the compound fracture of the left forearm without sawing off half an inch of the protruding radius, which being done, reduction was effected, and an exterior or dorsal splint, extending from near the elbow to the end of the fingers, was applied and retained in place by strips of adhesive plaster carried around the arm at proper intervals, leaving the wound on the anterior aspect uncovered, which was dressed with absorbent cotton wet with a solution of carbolic acid 1 to 32, and then the whole forearm was bandaged. There was considerable depression of the vault of the frontal bone at the seat of the fracture of the skull, but it was deemed best not to resort to any operative procedure to raise the bone unless there should arise symptoms of compression. The hair was cut short, and compresses wrung out of ice-water were applied to the head. He was confined to a milk diet. The life of the patient hung, as it were, by a thread for the next few days, but he gradually recovered consciousness and strength, so that at the end of a week he appeared to be quite in possession of his mental faculties and in a fair way to recover. About this time the swelling of the eyelids had so far subsided as to enable the patient to open his eyes, when the right eye was found to be blind; though previous to the accident the sight was normal in that eye. The patient mended steadily till November 13th, two weeks from time of the accident, when he complained of headache, was irritable in temper, and had less mental vigor than on the previous day. A purgative enema was given without any marked benefit. The next day, about seven o'clock in the morning, the patient became suddenly convulsed, one convulsion following another in rapid succession. Upon arrival at the bedside, shortly after eight o'clock, I found the patient still in convulsions,

¹ Read before the Middlesex North District Medical Society, January 26, 1881.