she menstruated much more freely and with less pain than usual, and said that she felt much more cheerful and in better condition than for some years. A metallic intra-uterine electrode was used, in the belief that the dysmenorrhœa was dependent on the existence of endometritis.

CONSTIPATION.

CASE VI. Mrs. F., sixty-three, pelvic organs senile, complains of pain in back. This was thought to be due to shortened sacro-uterine ligaments and constipation. Vagina packed, and given elixir rhamnus Purshiana Co., N. F., teaspoonful t. i. d. In the course of six weeks, some relief from pain. Packing somewhat inefficient from laxity of the vaginal outlet. Cathartic increased to two teaspoonfuls t. i. d., without satisfactory effect. Given faradic current of low tension, with small sacral and abdominal electrodes, twice weekly. After five applications, was able to obtain a daily motion with one teaspoonful of the cathartic three times daily. Bowels have since continued in fair condition under the continued use of the same prescription.

If it be urged, in discussion of these cases, that they have been selected as favorable instances of the value of the current, I must at once plead guilty to the indictment. All cases do not make as favorable a showing as this. These were successful cases, and selected as an argument in support of the use of electricity, and of the view which I myself personally support warmly, that in properly selected cases it is a therapeutic agent of great efficiency. If in cases which are less fit for its employment it acts less well, and in improper cases does harm, that is no more than must be admitted for every potent therapeutic agent. The use of electricity is an art which must be carefully studied, which requires in its application much care and judgment, and, above all things, an accurate diagnosis of the presence or absence of its contra-indications. I must freely confess that when I first began to use the current, in many of my cases the result was not satisfactory, and I was obliged to discontinue electricity and resort to other means. In one of my early cases, positive harm resulted from an injudicious application of the faradic current of low tension, in the presence of a subacute inflammation; but with increasing experience, the proportion of marked successes has become considerable; the proportion of cases in which I have secured the alleviation of symptoms has become large, while the percentage of unbenefited cases steadily decreases: and I find that as time goes on the proportion of cases in which I use it is steadily though slowly increasing. I cannot help believing that in the hands of well-trained practitioners of intelligence, it is likely to be more and more highly rated year by year.

ETHER DRINKING.—Russia has become infected with the vice of ether drinking, and the pernicious habit has spread so rapidly that the Government has judged it necessary to prohibit the free sale of ether and of certain of its compounds, and to schedule it among the poisons the sale of which, even by pharmaceutical chemists, is surrounded with severe restrictions, as was lately done in Ireland at the suggestion of Mr. Ernest Hart. The measure has been very effectual in Ireland, and we hope it may be so in Russia.

CASES OF DYSPEPSIA WITH TREATMENT BASED UPON AN EXAMINATION OF THE GASTRIC JUICE.¹

BY GERTRUDE W. VAN PELT, M.D., BOSTON.

THE hope of a scientific basis for treatment in gastric disorders, and the fascinating possibilities suggested by the chemical analysis of the juices, aroused in the early days of this study, a natural enthusiasm; but, as the looked-for results often failed to follow the administration of the chemicals so clearly indicated, there has perhaps been a decrease in the general interest. Possibly too much was expected of it, for the truth of the text-books' teachings — that the stomach is outside the body — must not be forgotten. In treating it we are but at the threshold of the domain which is to be put in order, and the folly of considering any one symptom here, rather than in its relation to other symptoms and to their underlying causes, is true of dyspepsia, as of any disease. Still, a knowledge of the condition of the stomach is a certainty amid uncertainties. Even though that condition be dependent upon distant or obscure causes, such knowledge affords an aid too valuable to be discarded, and often plays an important rôle in helping to solve the varied and intricate problems which each separate case presents. In support of this belief I would like to present to you the histories of a few cases.

Before passing on to them, however, I will take occasion to show an arrangement for extracting the gastric juice, which I have found to facilitate very much the operation. To the tubes inserted in this glass can be attached by rubber tubings, the stomach-tube and an aspirator, and the glass can be held in place and concealed from the patient by placing it in a partly closed table drawer. Then after the introduction of the tube, if its eye happens to be in the liquid, and the air in the glass has previously been rarefied; the moment the stopcock is turned, a little liquid is forced into the glass. If the liquid does not run, it is due either to the stomach's being empty; to the eye of the tube being occluded, or what is more common, to the tube being pushed in too far or not far enough, so that the eye does not dip in the liquid. Always, before re-adjusting the tube, or withdrawing it, the air must, of course, be allowed to re-enter, so as to avoid any possible irritation from suction on the mucous membrane.

CASE I. Patient had been nervously tired for four or five years and at times had suffered from dyspepsia. For four months before treatment she had suffered constantly from it. Her symptoms were, heaviness in the epigastrium, occasional acidity and burning, failure of appetite, constipation, much loss of strength, nervous depression, sleeplessness and sudden attacks of dizziness, coincident with a distress in the region of the heart. During these four months, there were a few days when the symptoms were much aggravated, as she could take only milk gruels in small quantities,

¹ Read before the Section for Clinical Medicine, Pathology and Hygiene of the Suffolk District Medical Society, February 17, 1892.

and was unable to leave her bed. The first examination of the gastric contents was made five hours after a test-meal of soup, roast beef, potatoes and bread. The juice contained .17% of lactic acid. HCl was absent. There was much mucus, and much of the meat was undigested. Forty drops of a four per cent. solution of HCl were prescribed, to be taken in a glass of water during the first hour after meals, and the stomach was washed daily. This treatment was continued for three weeks, without any marked change in the symptoms, except that the patient was relieved for a while after each washing, and passed better nights. About this time she complained of a burning sensation, which was relieved by the washing, and which was, she thought, like the burning she had often felt before. Another specimen was taken, and what was surprising, it bore all the characteristics of a specimen taken from a patient suffering from hyperacidity; that is to say, there was an abundance of clear liquid, and a sediment of farinaceous food, which fell at once to the bottom. On examination there was found .45% of HCl, no organic acids, no mucus. The burning sensation before washing was, of course, due to the excess of HCl, as it had previously, no doubt, been due to the presence of organic acids. From symptoms alone, it would have been difficult, if not impossible to have recognized the change. The administration of HCl was stopped, and there was considerable difficulty in quieting the irritation of the gastric glands. The daily washing was continued and alkalies given, but the condition did not improve decidedly until coffee was given up, and only the blandest food eaten. Since this experience, I have begun treatment, in most cases, with smaller doses of HCl, and watched its effect more carefully.

At the end of six weeks, or nine weeks from beginning treatment, the secretion was normal; the appetite was much improved; the patient slept better; the sudden attacks of dizziness had entirely disappeared, and there was no distress in the stomach. The constipation was a more obstinate symptom, and did not disappear until several months later, after there was a gain in general strength. As soon as possible after the digestion became normal, the amount of nourishment was increased gradually, as the patient could bear it. During the year following, she gained fifteen pounds in weight, and very much in general strength. At times, after some unusual exertion, she suffered from dyspepsia, but rest, and a few washings always restored her.

CASE II. Miss K., thirty-one years of age. Had dyspepsia of ten years' standing, for which she had at various times been treated. She was subject to attacks of vomiting, so that, at times, for days together she could retain but little food. After an attack of pneumonia two years previous, her health was worse, and later the dyspepsia grew more serious, as she was often kept awake by it the greater part of the night. She suffered at time of beginning treatment from occasional vomiting of froth, with or without food, but the most distressing symptom was a constant sensation of gas rolling about in the stomach, which sometimes caused palpitation with a feeling of great weakness. There were attacks of gastric pain, which were relieved by mustard plasters; acid eructations; constipation and anorexia. She did not notice that certain kinds of food disagreed. Tongue was flabby and pale, and she was very anæmic.

Physical examination. Stomach extended on left

side to a point half way between umbilicus and pubes, and was not found at all to right of umbilicus; tenderness on pressure over this region; heart sounds normal; apex beat on a line with nipple; pulse 90, and irregular, full and compressible. Urinalysis, normal. Analysis of the gastric juice three hours after a test-meal; total acidity .37%; HCl absent.

As the patient dreaded having her stomach washed, the following treatment was ordered: eight drops of the fluid extract of *Pinus Canadensis*, in a glass of hot water, to be taken half an hour before meals; three drops of the dilute HCl in half a pint of water, to be taken during the first hour after meals. Her bowels were regulated; and she was treated with the constant current, 30 milliampères, twice a week, one electrode being over the stomach, the other opposite it on the back. At the end of two weeks she was feeling somewhat better, and a second analysis of the gastric juice was made, medicine having been omitted for that day. It was as follows: total acidity .4%, HCl .02%. Artificial digestion complete in 3 hrs. 39 m. With HCl added to the juice to make it .2%, it was complete in 2 hrs. 27 m., and with HCl to .2% and pepsin added, complete in 3 hrs. As the progress did not seem to be sufficiently rapid, the patient was persuaded to have her stomach washed daily; and the HCl, and galvanic current were continued also; in two weeks iron was added to the treatment.

The symptoms of dyspepsia rapidly disappeared, and four weeks later she said her stomach had not felt so well for years. Examination of the juice at that time showed the following condition: Total acidity .3%, all of which was due to HCl; artificial digestion complete in 1½ hrs. The constant current and HCl were stopped; and an analysis three weeks later showed the total acidity to be .1%; all of it due to HCl. She had at this time no symptoms of dyspepsia, if she confined herself to a simple diet, and her appetite was good. She remained free of dyspepsia for four months, until she caught a heavy cold. She is of a delicate constitution, has a marked strumous diathesis, and is subject to severe colds. These always reproduce the same gastric condition, which is, however, relieved by the same measures.

I will say, in regard to the galvanic current, that my employment of it was based upon some experiments made in Germany, which showed that it had the power to increase the secretion of gastric juice. I have since applied it for the same indication, directly to the walls of the stomach, by means of a deglutible electrode, devised by Dr. Max Einhorn, and described in the *Medical Record* of May 9, 1891. I used, on grounds purely theoretical at that time, the positive pole. Later I had this electrode, which I will pass around, made for me by Codman & Shurtleff. It is patterned after Dr. Einhorn's, but differs in being much smaller, in having a stronger and stiffer wire, so that the electrode can be pushed down, which makes it easier of introduction and less disagreeable to the patient; and in being much more securely fastened, so that there is no danger of leaving the electrode within the stomach. The copper-tip unscrews, so that if the wire should show signs of weakening at any point, it can easily be replaced by a new one.

To test the immediate effect of electricity upon the secretions, I have begun a few experiments, which were conducted as follows: The stomach was thoroughly washed, and the water, when clean, analyzed

for HCl. If none was present, 200 cm. of tepid water was given, and allowed to remain in the stomach ten minutes, then withdrawn and analyzed quantitatively. The same procedure, with the deglutible electrode in the stomach ten minutes, using the positive pole and a current of 25 ma. The same was repeated at another time, applying a current of 25 ma. externally. These experiments were so few that I will not report them in detail, but mention simply that the positive pole increased the secretion of HCl, as did also, to a less extent, the external application. In the case which I will report next, however, there was no secretion of HCl after the use of the current, but as she greatly improved under these applications, I inferred that they in some way improved the nervous tone of the stomach, and this is, I am inclined to think, the most important result of this therapeutic measure. Dr. Einhorn has published a most interesting article on this subject in the *Medical Record* of January 30, 1892.

CASE III. March, 1891. Mrs. T., fifty-nine years of age. Had never been very strong, but did not consider herself an invalid until about two years previous. During that time she had been a great sufferer, and had been confined to bed about half the time, with much pain and loss of strength. When she presented herself for treatment, she had almost abandoned hope of relief, and said she found life unendurable. Her chief symptoms were pain, loss of strength and attacks of vomiting. For months she had not been free from a burning pain in the middle of the back, which rendered her very nervous and prevented sleep. She had acid and gaseous eructations, no nausea as a rule, and rarely headache, but great loss of strength and enormous development of adipose tissue. Appetite was good, but as all food caused distress, she ate but little. Constipation and hemorrhoids. Examination showed no enlargement of the liver, but bowels and stomach much distended with gas. Heart sounds normal. Analysis of gastric juice four hours after a test-meal: Total acidity .27%; HCl absent. Liquid abundant and greenish. Gmelin's bile test, negative. Residue contained an enormous quantity of mucus, some starchy food and large particles of meat. Stomach was washed thoroughly after removing the specimen, and for the remainder of that day and the night following, there was great relief from the pain in the back, so that she slept six hours, a thing she had not done for a long time. As indicated by the analysis, HCl was prescribed. In two days her symptoms were aggravated and other specimen was taken. A quart of liquid was easily removed, bearing all the appearance of hypersecretion of HCl. Analysis showed it to contain .25% of acid, all of which was HCl. After this, a daily lavage of the stomach with a weak solution of *Pinus Canadensis* (which she soon learned to do herself) and the faradic current twice a week, constituted the treatment.

Frequent analyses of the gastric contents were made, with no uniformity in the results. The secretion of HCl was once as high as .3%, and often was completely lacking. Artificial digestion was attempted once when .25% of free HCl was present, but it was incomplete in eight and one-half hours, both with and without the addition of pepsin. The only constant condition seemed to be that there was always very much in the stomach, and food was often removed which had been eaten twenty-four hours or more before. The stomach was clearly dilated, though on account of the quantity of fat in the abdominal walls,

physical examination was difficult. After six weeks' time the patient was much improved. She slept well and was relieved entirely of the pain in her back soon after beginning lavage of the stomach. But she was still weak, and seemed as incapable as ever of digesting more than a small amount of the food she ate. It seemed doubtful whether she would ever be materially better, and she was told that relief from pain was all she must expect, and that possibly she might always need to wash her stomach. She possessed great courage and perseverance and said that seemed to her as nothing in consideration of the relief which it afforded.

The apparent irregularity in the secretions, suggested some nervous disturbance, and in the hope of influencing that, she was treated twice a week for two weeks with the constant current (10 ma.) over the pneumogastric nerve. A specimen removed after this contained what had been found once previously, a normal amount of free HCl, and no organic acids, but there was no added improvement after this treatment. The application of the galvanic current directly to the mucous membrane of the stomach was then tried by means of the deglutible electrode. The negative electrode four by six inches in size was applied over the liver or stomach anteriorly. This seemed to act very beneficially. She digested better; was able to eat more; and said she never felt the burning in the stomach, which had been so frequent up to that time. These applications were made twice a week, for six weeks, with a medium strength of 20 ma. During this whole time and four months after, the secretion of HCl was normal, varying from .15% to .2%, and no organic acids were present three hours after eating. On seeing her again two months later, it was found, that, although the other conditions continued improved, mucus was still present in quantities, and the muscular tone of the stomach remained defective. For these conditions the stomach was washed three times a week with a solution of silver nitrate, twelve grains to a pint of water; which was immediately preceded and followed by a washing with clear water; and twice a week the faradic current (with the coarse wire of Gaiffe's battery) was used within the stomach. In four weeks' time there was no perceptible mucus and but little food at the washings. Her general health at this time was wonderfully improved. She was obliged to attend closely to hygiene, but was free from pain, could do her own light housework, and was able to walk four miles at times without fatigue.

A satisfactory explanation of this case has not suggested itself to me, and I hope that some one here may be able to throw more light on it than I can. I do not understand why there should have been in the beginning such a difference in the secretions from day to day. The secretion of mucus was unusual in amount, out of proportion to the other symptoms in a case of gastric catarrh, and I have thought that, possibly, owing to this, the muscular atony and consequent dilatation, the food swallowed did not practically come in contact with the walls of the stomach, and that therefore the gastric glands were not stimulated to secretion; while at other times, owing perhaps to a difference in the character of the food, or to some different mechanical condition, the gastric glands were stimulated.

CASE IV. Miss E., aged eighteen years, was a delicate girl, of scrofulous history and somewhat anæmic. She complained of distress after eating, which was not great but constant, and her stomach felt raw after

taking a cold. Appetite was poor, bowels regular. As I disliked to propose stomach washing in this case, and as the symptoms seemed to indicate a slight gastric catarrh, HCl was given from time to time during a period of three months. But as there was no constant or decided improvement, a specimen of gastric juice was removed five hours after a test-meal. The total acidity was .33%, free HCl .16%. The solid residue which was small, contained considerable mucus and amylaceous material. Albumen digested in one and one-half hours in the oven.

Owing to a bad cough, which interfered with the use of the stomach-tube, she was ordered to drink half a pint of a weak solution of *Pinus Canadensis*, as hot as possible, one-half an hour before each meal; but four weeks later, there being little improvement, the stomach was washed daily with a weak solution of *Pinus Canadensis*, for six weeks, when she left the city. At first there was much food in the stomach at the washings, but this gradually decreased, so that towards the end, the stomach was generally empty. A specimen taken shortly before her departure contained .18% of HCl, and no organic acids nor mucus. She had distress in the stomach occasionally, but it was much decreased. Six months later she wrote that her stomach was not troubling her.

CASE V is a case of Dr. Morton's, for whom I made one analysis, and who has kindly permitted me to report it.

Mrs. R., sixty-eight years of age, was strong when young, but for fifteen or twenty years had suffered from dyspepsia. It began by distress after eating and a weak feeling in the stomach. At one time she had had catarrh of the bowels badly, which had disappeared. She used also to have pyrosis. At time of beginning treatment, suffered only from loss of appetite and weakness. Bowels, though regular, were sometimes much distended with gas. Never pain, but there was often a full feeling after eating a small amount. Weight 98 pounds, once weighed 130 pounds. Pulse 92. Stomach, somewhat dilated. Gastric juice three hours after a test-meal contained .29% of free HCl, and no organic acids. Peptones abundant. Artificial digestion complete in fifty-five minutes. Solid residue contained mucus and bloody mucus. This seems to me to be an instructive case, and illustrates well the difficulty of making a diagnosis from symptoms alone. A treatment by HCl would have been suggested in this case, almost, if not quite as much as in the last one, and yet there was a hypersecretion, whereas in the other, there was a normal amount only after several weeks' use of the drug. Had treatment been instituted to increase this secretion, it is quite possible that gastric ulcer might have resulted. For although the etiology of gastric ulcer is not yet determined, recent study has shown that in the majority of cases, this condition of hypersecretion and irritability exists. As the patient lived at a distance, and only came to the city once for a few days, she could not be closely watched, but under a general treatment tending to quiet the irritation and improve the nutrition. Dr. Morton tells me she has improved.

CASE VI. Mrs. T., forty-eight years of age. She had had for three weeks a constant burning pain in the stomach. Was nervous and frightened about herself. For some time she had had a domestic trouble, which had been a source of great anxiety. Stomach not dilated. Specimen of gastric juice three and one-half

hours after a test-meal: Total acid .1%, all of which was lactic acid. HCl was given and the stomach washed almost every day. After each washing she was relieved from the burning pain for the rest of that day, but the result was not permanent, and the treatment was not persisted in. Later, after a removal of the cause of mental anxiety, the dyspepsia disappeared.

CASE VII. Miss S., aged thirty, was extremely anxious, apprehensive and nervously depressed. She had suffered much from dyspepsia for over two years, and had been steadily growing weaker. Appetite poor. Troubled much with eructations and rolling of gas in the stomach, but suffered no pain, except much headache. She slept poorly, was very thin, having lost a great deal of flesh. She unfortunately was obliged to work hard, and was never free from worry. She had been treated in various ways for a long time without any great improvement. Heart sounds, normal. Stomach extended three fingers below umbilicus and was entirely on the left side. Specimen of gastric juice four and one-half hours after a test-meal: Quantity of fluid very abundant, total acidity .46%, HCl absent, peptones present, mucus abundant. The diet was first carefully regulated, HCl was ordered, and the stomach washed daily with a solution of *Pinus Canadensis*. In two weeks there was a normal secretion of HCl and .25% of organic acids. Once a week the stomach was washed with nitrate of silver (gr. xv to a pint of water). In four weeks there was no mucus observed, and these washings were discontinued. The secretion of HCl failed once again and the drug was renewed; also the positive pole of the galvanic current, with a strength of 25 ma. was applied directly to the stomach. After four treatments extending over four weeks, the secretion was normal, and she was feeling better. But as digestion was still very slow, faradism was used four times within the stomach, with the coarse wire of Gaiffe's battery. At the same time, washings with salicylate of soda, and salol internally, were used successively to control the abnormal fermentation.

She has had twelve treatments in all, which have been very irregular, owing to her living at a distance, and she is still under treatment. The secretion of HCl has been normal for a long time, but fermentation from organic acids has not been controlled. The lower border of the stomach is at the umbilicus, and there is so little food at the washings, that it is only washed occasionally. Her appetite is excellent, and she sleeps well. She has no headaches, but is troubled with rolling of gas more or less. Her strength has greatly increased. She is cheerful and able to do much work without fatigue.

The next case is especially interesting to me because I questioned at first whether I had not a disturbance of purely nervous origin to deal with, which could not be cured by treatment directed alone to the stomach. Results, however, seemed to indicate that it was a case in which removal of a peripheral irritation was able to avert a threatened nervous disturbance in a person who had such tendencies.

CASE VIII. Miss P., forty-eight years of age. Father died of apoplexy, and one sister has for years suffered from a severe form of migraine. Patient herself has never been very strong, though generally well and is able to work at the millinery business regularly. She comes for treatment on account of severe attacks

of pain in the stomach, which occur every five to seven days usually, but are occasionally delayed as long as two weeks, never longer. They are preceded by a nervous, restless and apprehensive feeling, which lasts from several hours to a day. She has occasionally, pain in the back of the head, and along the left side, in the arm and leg, and she thinks she is more apt to have that at the time of a gastric attack. In the intervals of these pains in the stomach, she is troubled very much with a distress which is relieved by eructations of gas. She has had this trouble for about ten years, but lately it is worse. She is well nourished, weight, 190 pounds. Bowels regular, but movements never well formed. Sleeps well, except just before one of her attacks. Urine, normal. The stomach-tube was passed twice after a test-meal, but the apertures became clogged with large pieces of meat, and the operation was not persisted in. A drop of the juice which remained at the bottom of the tube, did not affect Congo paper, showing that HCl was probably absent and certainly insufficient. She was ordered to take five drops of dilute HCl in a glass of water during the first hour after meals; eight drops of the fluid extract of *Pinus Canadensis* in a glass of hot water one-half hour before meals, and she was recommended to chew her food carefully.

Two weeks later she said her stomach felt stronger. She had had no attacks of pain and had less gas. Analysis of gastric juice: Total acidity .2%, HCl .07%. A very small amount of liquid came through the tube, probably on account of the abundant quantity of mucus. One week later was feeling well; had had no attacks of pain. Total acidity of gastric juice .2%, all of which was free HCl. The stomach was washed with water after the specimen was taken. A week later the patient came for the fourth time, having been under treatment five weeks. She had been overworking a few days and had been very tired. She was annoyed somewhat by gas in the stomach, but otherwise had no trouble. The stomach was washed with nitrate of silver (gr. xv to the pint), preceded and followed by a washing with clear water. She was ordered to continue taking three drops of dilute HCl after meals and drinking hot water before, for two weeks and to see me if she had any further trouble. Four months have passed, and I have not yet seen her.

In three cases, which I will not report in detail, this method of examination has been most useful in excluding a gastric disease, when the symptoms seemed to point to it. One of these cases had been twice in a hospital to be treated for gastritis. All the discomfort and distress was felt in the stomach, but the main trouble was in the liver and to treatment directed to that organ she responded at once. I have treated a few other cases in this way, but as they were somewhat similar to the preceding, I will not take your time to report them.

School Trustee.—"Your class in physiology does not appear to be up to the standard, Miss Birch.

Teacher.—"I've done the best I could with the charts that I found here, Mr. Small."

School Trustee.—"Um—er—what did the charts consist of?"

Teacher.—"Six views of a whiskey stomach."

—Puck.

PROVISION FOR PATIENTS WITH CHRONIC DISEASES IN THE CITY OF BOSTON.¹

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THE object of this paper is not to present anything materially new; it is merely to call attention to a long-recognized defect in our institutions for the care of the sick, and to elicit discussion.

Although the provision for the treatment of contagious diseases and disorders that come under the care of the specialist is not all that can be desired, yet it is a fact that our present hospitals can provide reasonable accommodations for patients with acute diseases. Now, if it be incumbent upon us to provide for the proper treatment of such cases, why is it not equally incumbent to provide for patients with chronic disease? In point of fact the provision is most inadequate. The Massachusetts General and the City Hospitals are crowded with patients with acute diseases; the latter institution refuses incurable cases, and questions closely the reasons for a stay in the hospital beyond two months, although it gives temporary relief and shelter to many chronic cases. The Carney Hospital receives a few such cases; the Home for Incurables has sixty beds, and other smaller homes and institutions provide for perhaps as many more.

There is a large class of patients, of whom we see many in out-patient clinics and free dispensaries, who are victims of chronic incurable disease, phthisis, cancer, Bright's disease, paralysis, chronic surgical disorders, etc. How many such cases there are it is not easy to say, but that there are many requiring hospital care is a fact familiar to all of us and we can seldom find a permanent shelter for them. Of course, many patients with chronic diseases prefer to remain at home with their families and friends, free from the routine of an institution; but many others have no homes or need hospital treatment.

In one class of chronic diseases—those of the mind—hospital treatment becomes imperative; but the provision which the city makes for its insane is not adequate; out of 1,118 insane belonging in Boston who were in public institutions on January 1, 1891, only 399 were in the city asylums. The rest were boarded at the city's expense at the State asylums. In consequence of the repeated urgings of Dr. Fisher, however, further provision is now making for the city's insane within the city limits.

Setting aside the limited provision which can be made for patients with chronic diseases at the Carney Hospital and small private charitable institutions, the only places to which patients with chronic diseases can be sent is to the city almshouses at Long and Rainsford Islands. At Rainsford Island is the institution for female paupers, with 300 or more inmates.² Here there is a very old hospital with 50 beds, to accommodate acute cases among the inmates, and all the maternity cases. On Long Island is the institution for male paupers with about 300 inmates.³ The sick are cared for in the dormitories, and among them are 75 women, chronic cases, who have never been removed to Rainsford Island for lack of accommodation. January 1, 1891, there were 227 patients re-

¹ Read before the Section for Clinical Medicine, Pathology and Hygiene, of the Suffolk District Medical Society, February 17, 1892.

² Maximum number of females in 1890, 483. Average number of females at both islands, 437.

³ Maximum number of males in 1890, 430. Average number of males at both islands, 309.