Estes Park, which I am enabled to do through the kindness of Mr. F. H. Chapin, of Hartford, Conn., who took them.

Clothing.—One should have as thick winter clothing in Colorado as in this climate, for the mornings and nights are often very cold. In the sleeping room, moreover, one must make sure that the floor is tight and covered with a warm carpet. A fire should be made in the morning before the invalid arises.

Expense.—It is expensive both going to and living in Colorado. The cost of the journey there is from seventy-five to one hundred dollars; and board in Colorado Springs, as I have said, is from twelve to fifteen dollars a week. Rent of cottages is from fifty dollars upwards. About the only thing that is cheap is horse-hire.

Effect from the Altitude.—Some patients think it wise to make the ascent from the Missouri River to Denver gradually, so as to become accustomed to the altitude. The majority, however, I think, go at once to the altitude at which they are to live, and generally, so far as I can learn, experience no especial discomfort or harm from doing so. For about ten weeks I lived at an altitude of from six to seven thousand five hundred feet or more, and climbed mountains, three of which were over fourteen thousand feet high, without experiencing the slightest discomfort. Nor, indeed, was I in any way unusually affected, except, perhaps, on three occasions. Twice when on high mountains I had a slight headache, and the third time when at Leadville, which is over ten thousand feet high, nearly to timberline, it seemed to me that in walking I got out of breath more quickly than usual. I have climbed high mountains with one of affected lungs, who seemed to endure the exertion and altitude about as well as I. A curious effect of the altitude was noticed by a physician in his own case. When about ten thousand feet high, at which altitude he generally lived, the fever which accompanied his pulmonary trouble was kept in abeyance. When, however, he descended to a lower level it recurred, or increased in severity.

Length of Residence.—In whatever climate one finds his lung trouble improving steadily, there he should remain, not only until all signs of mischief disappear, but, in many cases at least, as long as he lives. I feel convinced that this is the safest and wisest plan, and I think that physicians of experience are gradually growing to this opinion. This is especially true of the Colorado climate, which is such a radical change from the one the patient is likely to come from. I believe the slow improvement, or lack of any improvement, in many cases is due, partly at least, to the worry over the enforced exile, and eager watching for the time when they think they will be able to return to their homes. It is often noticeable how quickly and permanently those improve and recover who take up their residence in Colorado, and settle down to permanent living there, with their friends and family about them. The contrary is also observed with those who make it a mere health resort, and are separated from their family and friends; as, for instance, a wife from her husband, or a daughter from the rest of her family.

—The *Ecole Pratique*, of Paris, was lately damaged to the extent of \$20,000 by fire.

LOCAL MASSAGE FOR LOCAL NEURASTHENIA.¹

BY DOUGLAS GRAHAM, M.D., OF BOSTON, MASS.

NEURASTHENIA, as I understand it, may be either general or local, affecting the nerves or nerve-cells of all, or any part of the cerebro-spinal or sympathetic system. Its manifestations are those of exhaustion or too easy exhaustibility of nerve-force; and its pathology, malnutrition of the nerve-cells involved, with concomitant instability of their circulation in the form of anæmia or hyperæmia, or alternations of these. It predisposes to, it accompanies, it results from disease; the nervous shock and the tedious recovery from injuries point to other sources, and it may be caused by overwork, worry, or sheer laziness. The agreeable fatigue after a satisfactory day's work that insures sound sleep may be regarded as a healthy form of neurasthenia, if the Hibernianism may be pardoned.

It is a matter of common observation that those who are compelled to hard manual labor seldom suffer from nervous prostration; and amongst the more fortunate who may be predisposed to neurasthenia, those who are deeply interested in some hobby or occupation that keeps mind and body active, have found the best means of prophylaxis. The same means that serves for its prevention also supplies us with a clew to one of the most valuable agents that can be employed for its relief or recovery. Exercise keeps the circulation active, but requires effort of brain, spinal cord and nerves, as well as muscles, at a time when our object may be to afford rest to one or all of these parts of an over-taxed nervous system. Massage supplies this want, and will keep the circulation going with a minimum or no expenditure of nerve-force from the patient, and deep massage without friction will lessen the beats of the heart, and afford it rest also. Nay more, for it is getting to be the fashion not only amongst the laity, but also with some physicians, to say that massage imparts energy to the patient, though I confess I do not exactly understand what this means. Certainly, many who submit to massage feel much more vigorous, light, and supple after even the first application than they did before it. But may not this rather be owing to the rousing of their latent energies, and restoring the equilibrium of their forces, by facilitating the circulation of blood and lymph, and the transmission of nerve-force?

I have previously stated elsewhere that in cerebral exhaustion the relative value of massage was almost *nil*, and that out-of-door exercise was of paramount importance; but I have since found reason to modify this in favor of more massage and less exercise. In such cases, massage of the head alone daily, or every other day, is better than applying it all over the patient, unless there be a rare idiosyncrasy that will not allow the head to be manipulated.

There are people, not a few, who, when using their brains, suffer from uneasy sensations in the lumbar or dorsal region, and these discomforts continue after the cessation of study, causing wakefulness. Generally, there is also some spinal irritation in the region affected. In such cases, massage of the back alone will often induce sound sleep, and, next day, the patient feels inspired with faith, hope, and courage, in place of doubt, dread, and fear of meeting appoint-

¹ Read before the Section of Clinical Medicine, Pathology, and Hygiene of the Massachusetts Medical Society, Suffolk District, November 9, 1887.

ments. With these cases, a much more marked effect is produced by local than by general massage, except when the tenderness of the muscles and spinal irritation is extreme, unfitting them for every kind of work, and then the massage should be general, omitting the back at the first *séances*, but gradually approaching it at subsequent ones.

In other cases of what may be called local neurasthenia, if the term can be allowed for this purpose, such as writer's cramp, or the cold, small, and feeble muscles resulting from injury, disease, or disuse, massage and exercise, carefully adapted, have given excellent results. To these have recently been added another affection; namely, laryngeal cramp of musicians and speakers, for the local treatment of which electricity and massage are considered the most effectual measures.

It is not the purpose of this paper to go into the details of applying massage, nor to consider its minute effects; but I think it will be a revelation to many to experience either in their own heads, or to observe in those of their patients, the light, comfortable, delightful feelings that are produced by the resistance of a skilled manipulator to forward, backward, and lateral movements of the head. The impression is that the interior of the head has been benefited, and the effect is hardly secondary to massage, which rather gives the impression that the exterior has been improved.

The following cases seem to me sufficiently worthy of notice as examples of the conditions mentioned:

CASE I. A. J., twenty-three years of age. Three years prior to my being called to him, he had been winning races at college at the same time that the functions of his brain flagged, and study had become so irksome, producing headache and insomnia, that he gave it up for a year. At the end of that time he returned to college for a year, and, to use his own words, "patched up and graduated," and for the year before I saw him he had been trying to recuperate by resting at home. At this time, even walking sometimes produced discomfort in his head. At my first visit he had been suffering from headache, with tolerably acute pains in the external branches of the fifth pair of nerves, and had had but little sleep for four nights. The immediate cause of this had been too much conversation with friends on the evening of a holiday. Massage of twenty minutes to the head alone, in the evening, almost completely relieved the headache and neuralgic pains, and was followed by an excellent night's sleep. After this massage, of the head, with resistive movements to the muscles of the neck, was repeated seventeen times in twenty-four days, and the improvement in sleep, in comfort of the head, and in the power of using his mental faculties was so great, that it became a serious question whether he should not abandon a six months' sea-voyage that he had engaged. Marks of improvement that may be mentioned were: that when he had an occasional wakeful night, he felt no worse on the following day; he had none of his former anxiety in taking charge of his class in Sunday School; he attended a large party late one night without any after-effects, and he walked about freely, and all while he was preparing for an absence from home of six months or a year. Medicine had been laid aside before massage was tried in this case.

CASE II. Rev. D. L., aged sixty-six years, has a good appetite and is well nourished, weighing about one hundred and eighty pounds. For twelve years, he had

suffered much from wakefulness. He required from eight to nine hours of sleep, but seldom got more than five or six hours of broken, unrefreshing slumber. At times he would fall asleep soon after retiring, to wake up in a short time; at others, he would lie awake for hours before getting to sleep. Besides discomfort about the head, he had still more distressing dull aches and uneasy sensations in the lumbar region, aggravated by study or wakefulness.

He found some relief from giving up his ministerial duties ten years before I saw him. He came to me on the 25th of January of this year, and, after thirty-five minutes of massage on his head and back at noon-time, he passed the remainder of the day in comfort, and that night and the following had seven hours of sleep each, so that when he came to me on the second day after massage he was hopeful and radiant. Massage was repeated at 11 A. M. on head and back, with increase of comfort to the patient. He did not sleep so well the following night as he did the two preceding nights, but he realized that he was quiet and serene, and felt that he was resting, and next day was refreshed. This day he had a refreshing sleep of an hour and a half in the afternoon, which he never could obtain before when well, and that night slept steadily for seven or eight hours. This patient had massage three times weekly, at or near noon, for seven or eight weeks, and the result of the first week is a fair average of the succeeding weeks: five good nights of sleep out of six, with a nap of an hour or two in the afternoon; and, when wakeful, he felt that he was resting, and, the following day, was not miserable from loss of sleep, as before massage; vigor of body and mind gradually increased, and he could take part in lectures, sociables, and other evening entertainments without loss of sleep, as formerly. Mild tonics and stimulants always made this patient worse. An epiphora that had troubled him for many years disappeared under massage of the eyelids.

CASE III. Mr. E. B., thirty-five years of age, had been in good health for several years, and attended to his business, which involved great detail, from 9 A. M. to 6 P. M., with an hour off at noon for lunch. He had remained in the city all the previous summer, and felt very well when he went away for a vacation of several weeks to Colorado, returning on the 20th of November. From the time of his return he began to suffer from headache, which caused him to be out of his office several hours daily; and, by the end of three weeks, this became suddenly so much worse that he was obliged to leave his office altogether. There was a slight elevation of temperature, but still he had a good appetite, and slept well. I gave him massage of the head on three successive days, and the headache was relieved only while the head was being manipulated, and for a short time afterwards. When massage was being done on the right side of the head, the ache would disappear and increase on the left side; and, on doing both sides they were relieved, and the ache increased in the back of the head; and, on *masséé* the back of the head, the discomfort would disappear from there and increase in the forehead, and, on manipulating this region, it would disappear altogether for a time. In other cases, I have chased pain in this way all over the patients without being able to dislodge it completely, only temporary relief being afforded at the place of application.

CASE IV will serve to show still farther that it is

not always well for those who are inclined to nervous exhaustion to give up their employment when working easily, and go away on a vacation. Miss M. P., thirty-four years of age, teacher in a High School, had been subject to headaches all her life. Her parents had highly nervous temperaments. One year before I first saw her, the headache had been so severe that she was confined to bed for seven days with pains all over her and elevated temperature, and since then the headaches have been more frequent and more severe than before, and usually accompanied with nausea and vomiting. Evidently, the case was one of migraine. The ache was on the left side of the head, in the left eye and more especially over the left temporo-parietal region, accompanied with a crawling sensation at the back of the head, and soreness of the muscles of the back of the neck. The left side of the face was smaller than the right. She had great weariness and weakness in her arms, so that it tired her even to raise them. In the cervical and upper dorsal region, there was much tenderness on pressure over the spinous processes. Her appetite was good, bowels regular, and she slept well. Notwithstanding the increase in frequency and severity of headaches for a year, she had gained in weight, mainly adipose, so that she weighed one hundred and sixty pounds, her ordinary weight being one hundred and twenty-three pounds. She continued her duties as a teacher, and found that she felt better when occupied in this way than when not feeling compelled to do anything. Saturdays and Sundays were her poorest days, and a vacation of two months in the South ten months before she came to me was of no apparent benefit to her, but, she thought, made it all the harder for her to begin her professional duties again. Correcting examination-papers fatigued her more than anything else. She could walk three or four miles with ease.

The first massage of thirty minutes on the head alone left this region "perfectly comfortable," until the second massage was repeated, two days later, when this comfort was extended to the manipulated regions—head, neck, arms, and shoulders—and a burning sensation between the shoulders was also relieved. In four weeks, a continual wooden, numb sensation of the left side of the head was not only relieved temporarily, but did not return; and, corresponding objectively to this, her tough, indurated scalp had become soft and supple. Sixteen days after she came to me she could not stand and read on account of weak and uneasy sensations in the back of her neck, as if her head would drop backwards when she attempted to hold the book, but she could sit and read with ease. This was at the catamenial period, when she was generally worse in every way. But, two days later, she was much surprised to find that she had recuperated more quickly, and to a greater extent, than ever before. This patient had massage twenty-five times in ten weeks, with increasing improvement, and this continued after treatment was omitted, so that she was practically well—sufficiently well to enjoy her summer vacation, which helped to confirm the benefit previously received. Six months later, she reported that she had continued quite well. The following spring her troubles returned in the same way, but less severely than formerly. They were speedily removed by massage, and staid away for a year, when, again, there was a slight relapse, and more speedy recovery under massage. At times, she had

found *nux vomica* more beneficial than any other internal remedy, but even this had lost its effect before massage was tried.

CASE V. Mr. J. B., aged thirty-three years, has always been a nervous man. He often felt fatigue in the lumbar region, but this he regarded as a matter of course, and he was always capable at business until six years before I first saw him. At that time he was in an elevator which was being tested against sudden falling by means of some "sure patent preventive." The experiment failed, and the elevator fell eighty feet with six men in it. While descending, our patient sat as tailors do, hoping thereby to diminish the shock of stopping. He got out apparently none the worse, walked four squares to his newspaper office, for he was then an editor, and dictated an account of the accident. He staid at home for five or six weeks, but was not confined to bed. After this he resumed his duties, but it was eight months before he could walk a mile. For a long time, in the evening, the region of the spine was painful, but relief was often found by pouring cold water upon it; at other times, from very warm water. During vacation he was perfectly well, and played lawn tennis. For three weeks before I saw him he had suffered from pain in his back and legs, and could walk but a very short distance at a time. Conversation and reading quickly tired him, and part of either would escape his attention. A few hours at business would cause nausea and headache, and make him feel generally used up. Appetite, bowels, and sleep were in a normal condition.

At my first interview there was much tenderness on pressure over the spinous processes and muscles of the back; but, after three massages in nine days, they could be manipulated quite vigorously. After six massages in eighteen days, he was practically as well as ever. Manipulation was exceedingly agreeable to this patient, and, while it was being done on either leg or hip, the agreeable sensation was felt in the back and in the other leg and hip, as well as at the seat of application. About once a year, usually in fall, after his vacation, this patient finds himself used up, as just described, and he has learnt by experience to rely on the prompt relief afforded by massage. He has also found wine of coca of some use. I have frequently made similar cases worse by using massage too vigorously to begin with.

CASE VI. When Mrs. M. W. came to me in October, 1884, she was fifty-eight years of age, and weighed 213½ pounds. Her adipose tissue was supple, and of good consistency. She had then been suffering for three years from a continual, distressing feeling of weakness in the right leg and thigh, which first made its appearance when there was some enlargement of the internal saphenous vein, but this had long ago disappeared. On examination, the whole limb seemed normal in every respect. The patient was not at all of a nervous, hysterical, or imaginative temperament, having been at the bombardment of Fort Sumter, once in a steamboat explosion, and once made a long voyage in a vessel with the cargo shifted, so that there was imminent danger of the vessel upsetting, besides having travelled twice round the world, on one of these occasions taking command of a vessel for four weeks amidst shoals and breakers in the China Sea.

A walk of a square was as far as the patient could go with comfort, and a walk of one-fourth of a mile caused great fatigue, and increased the feeling of

weakness. She had tried absolute rest for one, two, and three months at a time, during which she lost flesh, but the limb did not improve. At my request, she omitted potatoes, sugar, and butter from her diet, and began walking for two minutes every hour during the day, which was increased daily one minute every hour. Massage was given to the leg, thigh, and hip three times weekly. The first time it comforted and rested the limb, and after this passive and resistive movements were also given, which at first tired the limb, but this was at once counteracted by manipulation. At the end of two weeks she could walk half a mile without fatigue — twice as far as she could before with great fatigue — and a distressing pain that previously came after slight exertion at the exit of the sciatic nerve had not been felt for a week. At the expiration of four weeks the patient walked a mile and a half with ease, feeling but slight general fatigue thereafter, and the limb that had been weak was not so tired as the other. It was by her own wish that massage was repeated occasionally for a few weeks longer, and she has continued well ever since. Under the restricted diet she lost seven and a half pounds, and no doubt but this aided her recovery.

CASE VII. Miss E. H. was thirty-nine years of age when I attended her in the winter of 1883-84. She is irregularly astigmatic, and suffers from headache, and this is worse at the menstrual period, which recurs every three weeks and a half, accompanied with pain. She suffers much at times from indigestion. She is a lady with a strong mind, a clear intellect, an unwearied conversationalist, and, in the language of her physician, who sent her to me, "she is a preëminently hyperæsthetic subject, and would be hysterical, did not the brain govern the *cerebrum abdominale*." For five years she had suffered with pain in her right knee, impairing locomotion, and, the latter part of this time, there was pain also in the outer and posterior aspects of the thigh, where the muscles were considerably atrophied — so much so that her other discomforts seemed small in comparison with those of the limb. The trouble in the limb came when she was run down from nursing a sick relative, and, coincident with this, a severe cough that had been increasing every winter disappeared, and did not return. During these five years under rest, with and without fixed dressings, changes to country and seashore, the use of tonics and sedatives internally, and blisters externally, there would be sometimes a little improvement in the knee, but always followed by speedy relapse on slight or no provocation, such as accidentally hitting it against something, or being obliged to use it a little more than usual. At times, the pain was relieved by walking; at others, made worse. It was aggravated by cold weather and by riding in a carriage.

Examination showed that the affected limb was much smaller than the other, the skin cold and dry, the muscles atrophied, but there was nothing especially noticeable about the knee, save slight puffiness and great tenderness on pressure upon the internal condyle, not in the skin. Owing to pain and weakness, which were aggravated by walking, she could take but a few steps when massage was begun, and the only symptom then in her favor was steady sleep. Massage was applied three times a week for eleven weeks and a half, being omitted for a few days at one time, on account of unusual pain in back, stomach,

and intestines. For the first four weeks, massage, with gradually increasing exercises, was confined to the affected limb, with the result that she was, at the end of this time, taking four walks daily, of ten minutes each, besides exercises of standing on tip-toe, stepping up two steps at once, holding the limb out extended, and elevating it sideways when lying down. From the first, the skin became warmer, softer, and suppler, and the muscles fuller, as shown by an increase of one-half inch around the calf; one-fourth inch at the knee; one-eighth inch three inches above the patella; and one-fourth inch seven inches above the patella. When treatment was discontinued, these gains were one-half inch, five-eighths, three-eighths, and seven-sixteenths, respectively. But at the end of four weeks the pain was still about the same, notwithstanding the improvement in locomotion, nor had it entirely disappeared when massage was given up.

As soon as she made known the head and abdominal troubles, massage was applied for ten minutes to each of these regions also, which was during the last seven weeks of treatment. Headache was improved, sleep became more refreshing, digestion easier. During the last eight or ten days of treatment, it became evident that, though the patient was much better, and could go about much more freely on foot and in a carriage, she had come to a stand-still, and consequently the treatment was terminated rather sooner than she wished. A year later I saw her and she was the picture of health. Her appetite was enormous and digestion good. She had gained many pounds in weight and could walk freely, but still suffered from headache. She considered, and I think rightly, that massage had given her a start, and improvement had continued since it was omitted, for no other treatment had been used.

Amongst people who may be considered perfectly well, there are few, if any, who have not some weak points. When fatigued or worried I suffer from tension and dull ache throughout my whole right side. In September, 1884, when in Paris, I had one man give me half-an-hour's massage on my right side only, at 2 P. M., and another half-an-hour's massage on the same side at 5 P. M. The manipulation was slight, superficial and rapid and at the time of its being done seemed very ineffectual. But that night I never slept so sound in a railroad-train in all my life, as I did from Paris to Calais, and while crossing the channel I was not even sick. Two days later I played deck quoits all one afternoon when the thermometer was 80° in the shade and the ship rolling. Next morning my playmates could scarcely get out of their berths, they were so stiff and tired, and so was I, but the fatigue was all confined to my left side and not to the right as formerly.

It may be said that these were not very sick people, but they are cases that prove troublesome to physicians, and they were certainly in conditions which any one of us would gladly be freed from. It is not necessary that I should dwell upon extreme cases of nervous prostration that have been treated by absolute rest, forced feeding, massage and electricity. I could give further details of the above mentioned cases and also of similar ones which would seem to justify the following conclusions:

- (1) That massage induces sleep.
- (2) That even when massage is applied in the forenoon its soporific effects may not disappear before bed-

time; though in general the later in the day massage is used for promoting sleep the better.

(3) Disagreeable feelings of drowsiness and languor do not necessarily intervene between massage in the forenoon and sound sleep at bed-time. Aptitude for rest or work generally follows massage.

(4) When people are wakeful after massage they may not be restless nor feel the loss of sleep on the following day.

(5) Spinal irritation is relieved or disappears under massage.

(6) For local neurasthenia there is no need of general massage, unless the whole system be secondarily influenced.

(7) When affections have come to a stand-still under massage, improvement may yet go on after massage has been discontinued.

(8) For improving the nutrition of nerves and muscles, restoring natural sensation and motion, massage may succeed when other means have failed.

(9) Deep massage without friction has proved of more value in my hands than all other forms of massage put together, in the cases herein considered.

(10) Massage can be overdone, producing opposite effects from a moderate application.

(11) Besides massage, carefully-graduated exercises at regular times, are valuable accessories in the restoration of motion.

(12) Massage is not the only means of treatment for neurasthenia. Its selection is usually decided upon after the failure or exhaustion of every other means; in the same manner that the shrewd old divine decided that it was not wise to let the devil have all the good times to himself.

A CASE OF CHRONIC PANCREATITIS, WITH SYMPTOMS RESEMBLING MALIGNANT DISEASE.

BY E. L. CALL, M.D., BOSTON.

MRS. B., age sixty-two, widow, was first seen February 24, 1886. She was of medium height and weight, her skin was sallow, and her countenance haggard and anxious. Her habits of life were regular and her hygienic surroundings good. She said she had been well till within the past three or four months, but more searching inquiry showed that her appetite had been very capricious for a number of years and that during the last year she had lost strength and a moderate amount of flesh. Her diet had been mostly of the saccharine and starchy foods, as she had always disliked meat. For the past few months physical exertion of any kind had tired her out of due proportion, and during the last few weeks even moderate exercise had been followed by breathlessness and beating in the arteries of the neck. There was complete anorexia, and the bowels were very constipated.

The physical examination was as follows: Skin, a muddy yellow; tongue, rough, slightly coated; lungs, normal; heart, normal in size and position, moderate blowing murmur throughout the cardiac area, most marked over the base; abdomen, normally resonant; liver dulness, normal; no increased spleen dulness; pelvic organs, normal; urine, normal.

¹ Read before the Section for Clinical Medicine, Pathology, and Hygiene, of the Suffolk District Medical Society, November 9, 1887.

In consequence of the negative result of the examination, the case was regarded as one of profound anæmia, and the treatment was directed toward regulating the bowels, and assisting nutrition easily by digestible food and some of the most assimilable forms of iron.

The gravity of the symptoms increased rapidly; the simple act of rising from her chair caused dyspnoea, food of all kinds was very repugnant, the skin grew more sallow and the feet œdematous. She vomited occasionally, especially after any unusual movement. Temperature 100°; pulse weak, 90 to 100. This rapid change for the worse made me feel that the case must be either one of pernicious anæmia or some concealed organic disease, and I therefore asked for a consultation.

Dr. R. T. Edes saw the patient with me, March 16th. He did not think the anæmia profound enough to warrant a diagnosis of pernicious anæmia, but as he could find no proof of organic disease, he advised full doses of liq. pot. arsen., and gave a very guarded prognosis. A microscopical examination of the blood showed the red corpuscles notably diminished. No increase of white corpuscles and none of those irregular forms of red corpuscles characteristic of pernicious anæmia. The patient was kept in bed and fed per rectum as well as by mouth.

She improved for a time under this regimen, the dyspnoea becoming less troublesome so that during part of April and May she was able to go down stairs and to ride out occasionally. In fact the dyspnoea did not trouble her again to any amount till just before her death. I never felt, however, that the improvement was permanent, for her color remained bad, and she did not gain flesh nor appetite.

Early in July she complained of fluttering in the epigastrium and her distaste for food was so great that only the force of a strong will enabled her to eat or drink. The abdomen was again examined, slight increase in liver dulness was noted.

On August 16th, she had a sharp attack of hepatic colic followed by intense jaundice and so much nausea that she was fed entirely by rectum for five days. She rallied very slowly and now began to lose flesh quite rapidly.

On the fourteenth of October she had another attack of hepatic colic, and passed a gall-stone the size of a pea. After this the signs of digestive disturbance were more marked. She complained constantly of a burning pain under the lower end of the sternum coming on about two hours after eating. She also complained of a feeling of weight in the bowels when she sat up as if some heavy body were dragging from the spine. As she was certainly the least nervous or imaginative person that I ever met, these symptoms deserve more attention than they would in ordinary cases.

The bowels were either constipated or relaxed. The stools varied, being sometimes perfectly normal in appearance, sometimes sticky and putty like, sometimes gray in color, often they contained undigested food. Throughout her illness every stool was examined by her daughter, an unusually intelligent lady, and I saw many of them myself, but never could see or hear of any of the fatty stools considered to be characteristic of pancreatic disease.

Early in February, she began to vomit irregularly and complained constantly of distress after eating. She never had another paroxysm of hepatic colic, but