centre of vertebral column. Cicatrix of counter-opening one inch and a half lower down in the same vertical line. On opening up the fistula it was found to enter a cavity extending outwards beneath the posterior border of the scapula to the angle of the ribs, upwards to the fourth, downwards to the top of the ninth rib, and inwards to the median line. From this cavity a fistulous opening, situated between the fourth and fifth ribs, extended directly forwards into the cavity of the chest. This opening, which was not more than two lines in diameter, had smooth, sharply defined borders.

On opening the abdomen the diaphragm was found at the top of the fifth rib on the right side, and the bottom of the fourth on the left. The left lobe of the liver apparently enlarged, extending to a point nearly beneath the cartilage of the ninth rib, and upwards to the fifth rib, at a point two inches outside of the junction of the cartilage with the rib. External surface of the intestine normal in appearance. The abdominal cavity contained about eight ounces of clear serum.

On removal of the sternum the pericardium was found to contain somewhat less than one half an ounce of clear serum. Left heart contracted, right dilated. The mitral valve was slightly thickened on the edges, and barely admitted two fingers; tricuspid admitted three readily.

Right pleural sac contained about three fourths of a pint of clear serum, and the left about one fourth of a pint, which was slightly turbid.

Apex of right lung presented a firm, oblong cicatrix, one fourth of an inch deep, indicating old trouble. The anterior border of the middle and upper lobes presented small patches of recent catarrhal pneumonia. The left lung was bound to the chest walls posteriorly by firm adhesions extending from the fifth rib upwards over the apex. The upper two thirds of the lung itself was solid, owing to a recent pneumonic process.

On tearing away adhesions which bound the lung to the chest walls a circumscribed pus cavity was opened extending from the clavicle to the top of the fifth rib. The left half of the anterior surface of the first, second, third, and top of the fourth dorsal vertebræ was found carious, as was also a portion of the first, second, third, fourth, and fifth ribs. The first rib was more or less carious from a point directly under the clavicle to its head, and the remainder from their heads to about opposite the anterior border of the axillary space. The first rib was the seat of much more extensive disease than any of the others, having entirely disappeared at one point, just beneath the clavicle, only the periosteum on the upper surface remaining.

The muscles of the back were entirely separated from the diseased portions of the ribs, and the soft tissues between them destroyed, so that each was entirely surrounded by pus.

The spleen was found to be the seat of commencing amyloid degeneration. Liver healthy. Kidneys more or less fatty, and presenting here and there the characteristic reaction with iodine. Bladder normal. The lower portion of the large intestine was found to be the seat of catarrhal inflammation with slight ulcerations. Intestinal canal otherwise healthy.

To review the case: a man after a prolonged illness, supposed to be malaria, is seized with severe and persistent pain under the shoulder blade, at the seat of which, after some months, an abscess is discovered and opened. The first discharge of pus is followed by im-

provement, and that in turn by gradual failing for many months and death, owing to the condition of things stated in the record of the autopsy.

The questions that naturally arise are, first, was the original trouble malaria? It was stated that there were no chills; the patient simply had a prolonged illness accompanied by severe pain in the head, fever, and prostration. He lived in a malarious region, and such troubles are not unfrequently followed by abscesses, necroses, etc. On the other hand commencing abscesses are not unfrequently accompanied by severe constitutional symptoms, so that with the evidence it hardly seems fair to say that it was of malarial origin. Secondly, where did the trouble begin? The first rib was entirely gone at one point, while all the others were but slightly affected, being scarcely more than denuded of their periosteum, hence it is natural to suppose that the disease was of longest standing at the site of the upper rib. The question why the pus found its way down back of the lung instead of in front is rather more difficult of solution. During various periods of his illness the patient was confined to his bed, and it seems possible that the horizontal position combined with the contraction of the apex of the lung, which took place at some period, may have had the effect of giving the pus this direction. Thirdly, ought not the wound to have been treated antiseptically? Had it been suspected that the abscess communicated with the interior of the chest it would have been done, yet subsequent developments show pretty conclusively that sooner or later it would have been abandoned. Fourthly, ought not a more accurate diagnosis to have been made at the beginning? Looking back upon the case now it certainly seems so. Towards the latter part of the patient's illness his extremely weak condition did not admit of any physical examination; earlier, the catarrhal pneumonia did not exist. If when first seen the very apex of the lung, that is, that portion above the clavicle, had been carefully examined it would seem that trouble might have been discovered that would have materially affected the prognosis.

CASE OF SLOUGHING OF THE MUCOUS MEMBRANE OF THE BLADDER FROM CYSTITIS FOLLOWING CONFINEMENT.

BY W. J. OTIS, M. D.

THE patient, Mary A., single, aged twenty-six, primipara, from whom this specimen was obtained, was confined in the Boston Lying-in Hospital on December 27, 1880. There was nothing to remark about her labor excepting a somewhat delayed second stage, owing to the smallness and tightness of the vagina. The perinæum was torn, requiring sutures. Examination of the urine passed during labor showed the presence of albumen, hyaline and granular casts. On the second day after delivery the albumen and casts had entirely disappeared. On the evening of the third day the following symptoms appeared: high temperature, quick pulse, offensive lochia, and a mild delirium. These symptoms however disappeared after intra-uterine douches of warm water and carbolic acid 1-80.

During the first week after confinement she was catheterized as often as necessary; at first on account of her perinæum, later from retention. During this time symptoms of cystitis developed, though not marked

enough to call for any treatment; nevertheless they persisted up to the day of her discharge from the hospital, January 10th, the fifteenth day after delivery. On January 28th, eighteen days after leaving the hospital, I was called twice to see her on account of retention. She was suffering intense pain in the region of the bladder, which, at the first visit, was only partially relieved by passing the catheter. At the second visit, on attempting to pass the catheter I could not insert it into the meatus. On looking to see what prevented the entrance of the catheter, saw a sloughy, shreddy mass protruding, which by using considerable force was extracted with my fingers, tearing it in the process. Immediately there came a gush of very fetid, ammoniacal urine into the bed, giving instant relief to the pain.

On questioning the patient as to her symptoms since leaving the hospital, she informed me that she had been daily getting worse; that she was in distress all the time, making water every ten or fifteen minutes; that the amount passed at each time was small, and that the urine itself was bloody, very thick with slime, smelling very offensive, and strong of ammonia.

Examining the specimen I found that it consisted of two very irregular shaped pieces of membrane, one five inches long by one and a half inches wide, the other three and a half inches long by two and a half inches wide. The membrane was somewhat elastic, not very tough, and had rather a saccular form. The exterior was of a whitish color, smooth, but not homogeneous, as there could be distinctly seen what looked like fibrous bands running in various directions. The interior was of a darker color, and everywhere covered with a gritty deposit, which could be easily scraped off. No orifices of ureters or urethra could be made out. Owing to the torn condition of the specimen, it was impossible to ascertain whether it was a complete cast of the bladder or not.

Dr. W. F. Whitney has been kind enough to examine the specimen, and the result of his examination is as follows:—

Boston, February 12, 1881.

MY DEAR DOCTOR, — The specimen which you left with me for examination consisted of two pieces of thin tissue, one measuring about eight by three cm. and the other twelve by three, with a very irregular, jagged edge. One surface of the specimens was shaggy and covered with a yellowish-gray gritty deposit; the reverse surface was almost entirely free from the gritty deposit above mentioned, except along the edges, where it was covered for a short distance. This surface was in general smooth, but not homogeneous, for there were seen bands of rather darker colored tissue crossing it in various directions, giving to the whole a slightly trabeculated look. Upon closer examination some of the trabeculae were found to be small blood-vessels.

The microscopic examination showed that the gritty deposit was composed of transparent prismatic crystals with truncated ends, having the characteristic shape of triple phosphate, and of opaque rounded masses dissolving with effervescence upon the addition of nitric acid (carbonates).

The structure of the tissue itself immediately beneath the crystals was quite homogeneous, presenting nearly a slightly opaque granular appearance with here and there small round bodies (nuclei?) scattered through it. At one point these round bodies were quite closely and regularly arranged, as if there had previously been

cells there, the bodies of which had been destroyed, leaving the nuclei *in situ* (epithelium cells).

Portions removed from the reverse surface showed the presence of small fibres of elastic connective tissue and in some of the trabeculae the tissue was arranged as if composed of muscular fibres, but the separate cells could not be made out.

From this it seems that the specimens are real tissue and not the results of an exudation, and, moreover, that it is connective tissue, such as might be found in the mucous and submucous tissue of the bladder.

Yours truly,

W. F. WHITNEY.

As for the history of this case since the slough was removed, the recovery was slow, the slough coming away in January, and in the July following she was well. During the first week of treatment, on two occasions, small pieces of slough similar to the specimen shown came away during micturition. There were at no time any symptoms of a general character, the patient often commenting on the fact that she felt so well. The urine, which at first was offensive, alkaline, and of a dark red color from the large amount of blood present and having a large amount of dirty brown sediment, in three weeks became nearly normal. Frequency of micturition, accompanied with pain during and after the act, and incontinence, were the most annoying symptoms. The micturition was more frequent at night than during the day, at intervals of every half hour at first, later on hourly, and finally every two or three hours. The incontinence persisted up to the last, showing itself particularly on any such occasion as laughing, coughing, or sneezing. Another feature in the after history of this case was an occasional hæmorrhage from the bladder, occurring even after the patient considered herself well, especially after any severe exertion.

Treatment. — For the first two months rest in bed; milk diet, demulcent drinks, as flaxseed tea; triticum repens was tried for a short time. Citrate of potash and infusion of buchu she took the greater part of the time with benefit.

In addition, the bladder was washed out twice daily with a warm solution of borax ʒi. to ʒi.: this, however, had to be discontinued after two weeks' trial, as the bladder would not tolerate the presence of the catheter or the water. Thinking that the incontinence might be due to a relaxation or want of tone in the sphincter vesicae, atropia in one fortieth grain doses was tried for some time without any marked effect.

In April as the patient did not appear to make any improvement Dr. C. B. Porter saw the case with me in consultation. He advised etherizing the patient, dilating the urethra, and exploring the bladder with the finger. This was done, the urethra readily admitted the forefinger, and that portion of the urethra at the neck of the bladder was found to be dilated, standing open with thick indurated walls. The bladder was found to be sufficiently capacious, and its surface being explored found to be perfectly smooth and free from any deposit, thus showing that the patient's symptoms were not due to the presence of any foreign substance in the bladder, but rather to a relaxation, and want of tone in the sphincter and the urethra. The patient's inability to retain urine did not appear to be increased by this operation. After allowing sufficient time for the patient to recover from the operation, at the suggestion of Dr. J. W. Elliot, electricity was applied with a Gaiffe battery to the entire length of the

urethra. The application was made at first twice each week for three weeks, then three times a week for two weeks, and finally daily for one week, each application lasting from five to ten minutes. The patient's condition improved after the first few applications, and at the conclusion of these applications, which was in July, 1881, she declared herself quite well. I have seen her several times since that date, and she informs me that her recovery was complete. She states, however, that the capacity of her bladder is somewhat less than it was before her confinement.

TWO CASES FROM PRACTICE.¹

BY F. C. SHATTUCK, M. D.

A CASE OF OBSCURE NERVOUS FATAL DISEASE.

MAY 6, 1881, I was called to see a single lady of fifty-five from another part of the country, and obtained from her sister much of the following history: Her father died of gall-stones, her mother and several sisters are alive, the mother and one sister belonging to the class of nervous invalids. She herself had always been well and strong, but, especially of late years, had been very irregular and careless as regards food and sleep, often rising very early, going out to church, and breakfasting late and lightly. She had several great disappointments in life, and also persistent and real worries. The previous summer she nursed a member of her family during a prolonged and severe illness without sparing herself in any way. In September she noticed, and her attention was also called to the fact by others about her, that her utterance was defective and difficult, besides which there was impairment in the power of swallowing, particularly of solid food. This she thought was due simply to fatigue, and she had acquired, moreover, a horror of "nervousness." She took some rest, however, and improvement was not slow to follow. In a month, considering herself as well again, she resumed her former manner of life, and the troubles soon reappeared, to grow slowly and steadily worse up to the time I first saw her. She had suffered also much from nausea, and was all the winter under the care of a homœopathic practitioner, who is reported to have considered her symptoms as due entirely to malaria, and treated her with strong purgatives. She thought she had derived much benefit from this treatment, the nausea having disappeared, though the difficult deglutition and utterance had increased, and her arms had become weak, especially the left. This weakness seemed to be seated mostly in the shoulder, and it was impossible for her to raise the arms sufficiently to dress her own hair. In former times she had done a great deal of embroidery in a frame, an exercise which is especially fatiguing to the left arm. The muscles at the back of the neck were also weak, and her head sometimes bobbed forward in a very uncomfortable way. In March there was a time when the upper lids drooped, and she was sometimes forced to raise them with her hands to see properly. Of late she had been living entirely on liquids, as solids were very difficult to masticate as well as to swallow, the food getting between her cheeks and teeth. Speaking and swallowing were much more imperfect when she was tired for any cause, but she said that she was not always con-

scious whether she spoke well or ill. Her sister reported that some months ago she could talk distinctly up to twelve or one o'clock in the day, later only till eleven, and thus the difficulty had increased, so that when I saw her utterance was distinct for only half an hour or so after waking in the morning, but during that time as good as it ever was. Toward the latter part of the day her wants must often be communicated in writing. So, also, as regards deglutition, toward evening when she was tired, her food was often regurgitated through the nose. There never had been any failure to retain the saliva.

Her own opinion was that she was hysterical, and she laughingly said that this was a visitation upon her, as she had always declared that the hysterical condition was one into which she would never fall. I never saw anything about her to which this term would apply. She suffered no pain, slept well, the bowels were regular, and the tongue clean. The catamenia were always regular until September, since when they have been somewhat scanty and irregular; the last appearance was three months ago.

The pulse, skin, and respirations were all normal; the arteries showed no trace of degenerative change, and nothing abnormal could be detected about any of the thoracic or abdominal organs. Sensibility was everywhere perfect, the sight and hearing were normal, and the mind unimpaired. There was some pallor, and a certain flabbiness of the tissues rather than any emaciation. The only abnormal signs, other than those already spoken of, were partial paralysis of the soft palate with some effacement of the left naso-labial fold.

My diagnosis was functional paralysis due to exhaustion. Rest was ordered with food every two hours, and dialysed iron m. xv. three times a day.

May 11th. The nurse reported that she took her nourishment in good quantities, though slowly. Owing probably to the fatigue of the long journey which she had taken to reach Boston her sleep had not been nearly as good, and she had been troubled by bad dreams. She seemed, nevertheless, to be improving. I advised that she should go and sit in the Public Garden.

May 13th. Yesterday she saw three visitors, and went to walk in the afternoon, the wind being east, with a fog. She took some cold, and for the next week kept the house, the weather being very bad. The induced current from a Gaiffe battery was ordered applied to her neck, and passed through the arms for fifteen minutes night and morning.

May 20th. Is gaining in flesh and looks. Catamenia appeared to-day, the first time for three months. Metcalf's elixir of the phosphates of iron, quinine, and strychnia was substituted for the dialysed iron.

June 6th. She improved steadily up to this time, being able to talk distinctly for longer periods, to swallow better, to hold up her head more firmly, and the arms had gained in strength so much that she could dress her own hair. At this time, however, bad news came from home, which worried her, and threw her back somewhat in all respects.

June 18th. Dr. Webber saw her with me in consultation, concurred in the diagnosis, and recommended a continuance in the treatment. He thought that many months would be required before complete recovery could be looked for. Early in July a quiet cottage at the sea-shore was secured for her with her nurse, and after this improvement was more rapid. The cata-

¹ Read before the Boston Society for Medical Observation, February 5, 1883.