It is apparent that we have here a case of terminal or secondary dementia, a class composing such a large proportion of our asylum population. You may well ask, why if the young man is so quiet and well behaved he is not allowed to leave the hospital. This has been tried, but each time that he comes out he is soon excited, incoherent and noisy, and has to be returned to the hospital. In a few hours or days he is again quiet. This is quite characteristic of many of the terminal deteriorations. As long as they remain in the hospital they are quiet and even useful. But as soon as they come out in the world their weakened mental state gives way, the emotions become exalted and they then present a secondary confusional insanity.

The young man confesses to a venereal infection some ten years ago. On examination we find several deep scars on the side of the glands penis. So far as he can remember there were never any signs of secondary syphilis. The character of the attack, depth and extent of the scars and absence of all glandular involvement would lead us to think that we had a case of chancroidal disease without systemic infection. There remains therefore the two remaining factors to be considered, the heredity and exposure to lead. We learn that there has been obscure pains about the loins and abdomen for years. They are less now. We need hardly look for the blue line on the gums or other evidence of recent lead poisoning. They have long since disappeared. The psychoses directly caused by lead are usually accompanied by degeneration of the nerve elements of the brain and the general picture of paretic dementia. We should hardly look for a psychosis of this kind as a direct result of lead, but it is to be remembered that like other toxemias there is a profound nutritional disturbance. This in connection with the neurotic heredity, which is further shown by the stigmata of degeneration, an asymmetrical skull and small and badly shaped ears, are sufficient to account for the mental overthrow.

The prognosis in these terminal deteriorations is exceedingly unfavorable. Nothing is to be looked for from drugs. By a long process of training and education in a case no worse than this he may be able to live outside of a hospital and pursue some simple occupation. But he will always show that he is a damaged man and there will be a tendency to fall into a secondary confusional state.

NEURITIS OF THE MEDIAN NERVE.—This man was referred by a surgeon for our opinion as to the advisability of an operation for the restoration of the nerve supply of the right hand. Some three months ago he received a cut on the inner side of the wrist, the scar of which still remains. He resorted to some domestic applications and as a consequence the wound became infected, an acute cellulitis was set up and to relieve tension several incisions were made, one in the palm of the hand and two on the forearm.

The thumb, index, middle and adjacent sides of the ring fingers show almost complete anæsthesia of touch and temperature both on the palmer and dorsal surface.

There are no tropic disturbances such as would be shown by glossy skin, loss of nails, etc. The electrical reactions of the interossei and muscles of the thumb and little finger are normal to both faradic and galvanic currents. There is considerable loss of power of flexion of the fingers amounting to about one-half as compared with the left hand. The patient complains of no pain but only of numbness in the anæsthetic area.

The questions naturally presenting themselves in this case are; *First*, Was the nerve divided? *Second*, Is there pressure of a cicatrix upon the nerve? *Third*, Is it a case of peripheral neuritis? It is apparent that a correct answer of these questions will determine whether surgical interference is warranted at this time. On questioning him closely we learn that the anæsthesia was not noticed *immediately* after the incisions were made but came on sometime later and at no time was there a complete loss of motion. These points are sufficient we think to exclude an immediate derision of the nerve. Pressure from a cicatrix is, we think, excluded by the fact that sensation is impaired to a greater degree than motion, contrary to the rule observed in cases of pressure paralysis in which while sensation is the soonest disturbed yet motion is the last to be restored. We confess that the problem is a difficult one, yet the greater probability is in favor of a peripheral neuritis, particularly as the condition for which these incisions were made was an infectious cellulitis which might readily extend to the sheath of the nerve. We shall therefore recommend that no surgical operation be undertaken but the treatment appropriate for peripheral neuritis be employed.

PROCEEDINGS OF SOCIETIES.

Philadelphia Academy of Surgery.

MEETING APRIL 3, 1893. THE PRESIDENT, DR. WILLIAM HUNT, IN THE CHAIR.

TWO CASES OF AMPUTATION AT SHOULDER JOINT IN WHICH WYETH'S PINS, TO CONTROL HÆMORRHAGE, WERE USED.

BY JOHN H. BRINTON, M. D., PHILADELPHIA.

CASE I. *Osteitis deformans of the leg, followed at the expiration of twenty-three years by sarcoma of the humerus; amputation at shoulder joint by the oval method; use of Wyeth's pins to control hæmorrhage; death on the tenth day.*—E. B., aged forty-eight years; born in Massachusetts; publisher. About twenty-three years ago he noticed tenderness over the right tibia, increased by pressure, by severe or prolonged exercise, and by barometric changes. Various antirheumatic measures were employed, but without avail. The limb did not become much worse; he was able to be about and follow the business of his life for years. During this time he was not lame, but experienced a sense of weakness in the limb. To use his own expression, "he favored that leg." In the course of years the bones of the legs had gradually increased in thickness, and had become curved. About ten years ago he consulted the late Prof. Agnew, who told him that he could do nothing to relieve his slight disability of the limb, and that the affection was incurable. About three years since he consulted me, but I could add nothing to what had been already said, and could suggest no treatment.

In November, 1891, the patient consulted me for a fracture of the body of the left scapula. This resulted from a fall backward, as he was descending from the step of a railroad car, the scapula striking

the edge of a projecting board or plank. This fracture healed rapidly and well.

In June, 1892, in jumping from a street car while in motion, and while his hand grasped the railing, he experienced great pain just below the right shoulder, and felt that the arm was broken. He came directly to my office. On examination I detected crepitus, diagnosticated fracture of the anatomical neck of the humerus, and treated him for that injury. Union took place quickly, and full use of the limb was obtained. The only noticeable feature in this injury was the occurrence of slight pain referred to the outside of the humerus, about the lower portion of the upper third. There was at that time no enlargement of the bone at this locality.

On September 19, 1892, the patient again consulted me, stating that a "lump" had appeared on the outside of the humerus at its upper part. I examined the arm and found distinct cylindrical enlargement of the humerus, obviously a sarcoma of the bone, and I stated this to the patient, advising him to consent to the removal of the shoulder joint, if the diagnosis should be confirmed by a preliminary incision. At the patient's request, Drs. Packard and John Ashhurst saw the case in consultation, and they agreed with me in the propriety of immediate operation. From a careful examination of the patient's entire clinical history, there was no doubt in our mind that the case was one of osteitis deformans, first described by Paget, and which had been followed, as is so often the case, by the development of a malignant growth.

The operation was fixed for October 5, 1892, but at the preliminary shaving of the axilla, and preparation of the limb, or by the patient's lifting of the limb, fracture, which may fairly be regarded as spontaneous and non-traumatic, occurred, as was made evident at the time of the operation, done in the presence and with the assistance of Drs. Keen, Ashhurst, Packard, and others.

To prevent hæmorrhage, the long steel pins of Prof. Wyeth were inserted by Dr. Keen, the anterior one transfixing the anterior axillary fold in front of the vessels, penetrating the tendon of the pectoralis major muscle, and emerging near the end of the acromion.

The posterior needle pierced the deltoid and emerged just below the acromion. By carrying the needle, especially the anterior one, well upward, the constricting rubber band was placed so high as not to prevent the rotation of the humeral head, or to interfere materially with its disarticulation.

This patient suffered very slight loss of blood at the time of the operation, and received but little shock. He reacted promptly and perfectly, and for several days did well, the wound uniting throughout, On the night between the fifth and sixth day the temperature rose to 104.5°, and a copious eruption, similar to that of measles, appeared on the abdomen and chest, and eventually invaded the extremities, and indeed the whole body. There was marked coryza, and the tongue became brown and dry. This condition resisted all treatment and the free use of antipyretics. As the eruption spread, the temperature still rose, reaching 107.5° and 108°, and the patient died on the afternoon of the 15th day of October, the tenth day after the operation. The intellect remained clear until within an hour or so of the end.

I cannot but regard the death as due to some form of septic infection not easy to determine.

It is unnecessary to add that the antisepsis was observed in the treatment before, during, and after the operation.

The specimens, showing the sarcoma of the shaft of the humerus, and the peculiar indented fracture of its head and anatomical neck, are before this Academy. I particularly desire the observation of the Fellows to the fracture, which appears to me to have resulted from violent impact of an infiltrated diseased caput humeri against the edge of the glenoid cavity.

CASE II.—*Amputation at shoulder joint for enchondroma of humerus.*—The other case of shoulder amputation, in which I used Wyeth's pins, was that of a boy (I. B.), from Vermont, ten years of age. Nearly a year previously a tumor, apparently an enchondroma, began to develop on the inner side of the humerus, close to the head of the bone. It eventually grew until it attained a diameter of two and a half inches. It was painless, but interfered with the joint motion by its bulk. The boy was brought to the clinic of the Jefferson Hospital, and after consultation with my colleagues, I determined to remove the arm at the shoulder.

This was accordingly done on the 28th of November, Wyeth's pins being first introduced by my colleague, Prof. Keen. The anterior pin was made to emerge three-quarters of an inch above the tip of the acromion. As a result the circular turns of the tubing rested on a somewhat higher level than in the preceding case. Perfect freedom of the joint was preserved, and its disarticulation was not unimpeded. Previous section of the bone with the saw, as directed by Professor Wyeth, was not necessary. A roller bandage was applied as a compress under the tubing and directly over the artery. Hæmorrhage was thus perfectly prevented, and the removal of the limb, as in the former case, was practically a bloodless procedure. This boy recovered without accident.

I may state that in both these instances an Esmarch elastic bandage was applied previous to the insertion of the pins.

DISCUSSION.

DR. WILLIAM W. KEEN: I would call attention to the control of hæmorrhage by Wyeth's method. This afforded perfect hæmostasis. I never saw anything better, and as compared with the method which I devised myself a few years ago, by a compress over the subclavian artery, I think that it is vastly superior. In the first of Dr. Brinton's cases the pins were brought out at the end of the acromion process, and when the head of the bone was removed the skin slipped down and the constriction of the tube partially obliterated the cavity where the head of the bone had been. In the second case, the pins emerged three-fourths or an inch from the tip of the acromion, and there was no trouble from the slipping of the tube downward.

Dr. JOHN B. DEAVER: How much blood was lost in these cases?

Dr. BRINTON: In the first case there was a little blood lost on account of the slipping of the rubber tube—perhaps two ounces. In the second case there was practically no blood lost.

Dr. DEAVER: I have had no experience with the Wyeth pins in amputation at the shoulder joint. I have relied upon good assistance and have never seen much bleeding. There is no doubt that the method

described is an excellent one, and the only question in my mind was whether the presence of the tube did not interfere with the manipulation in disarticulating. In the few chronic cases on which I have operated all have recovered.

Dr. JAMES M. BARTON: Unless there is some tumor encroaching upon the joint, interfering with the manipulation, I am in favor of an assistant grasping the artery as the flap is divided. Some years ago I saw a case of large sarcoma of the head of the humerus perish from hæmorrhage on the table. The pins under such circumstances would have saved life.

Dr. W. W. KEEN: I think there is no possible doubt that the tube does not interfere with the manipulation, but that it assists us in making them. You have absolute confidence in your hæmostasis which you cannot have in any assistant whose arm or thumb is apt to get tired.

Dr. H. R. WHARTON: I have not had any experience with Wyeth's pins in shoulder joint amputation, but I can see how the method should be very useful, although I have not seen much bleeding where there have been good assistants. In my experience the most blood has been lost in the preliminary incisions. The only point would be in regard to the interference with the disarticulation if the tube slipped. I have seen Dr. Agnew use a pin under the vessels with a ligature above, which controlled the hæmorrhage very satisfactorily.

THE PRESIDENT: Some years ago I used the Esmarch tube in the shape of a figure eight in amputation at the shoulder joint with perfect success. An assistant held it up when there was any tendency to slip.

Enterectomy for Obstructive Epithelioma at the Ileo-Cæcal Valve; Secondary Anastamosis Operation by Abbe's Long Incision.

BY JAMES M. BARTON, A. M., M. D.

Surgeon to the Jefferson College Hospital and to the Philadelphia Hospital.

I saw Mr. B. for the first time, on April 18, 1892, at Millville, N. J., in consultation with Drs. Smith and Newell. He was in bed, was very pale and thin, and had frequent attacks of sharp pain while we were talking to him. I obtained the following history. He was twenty-seven years of age, and had been in his usual health until the first of January, when he had an attack, similar to the present one, lasting one week. From then until the latter part of March he was able to attend to his work in the glass house, but was troubled with some pain and considerable tenesmus. He went to the water closet from four to eight times daily, passing, with difficulty, a few small scybala each time. His constipation increased until four weeks ago he had several attacks of complete obstruction, each lasting four or five days, and only relieved after taking many purgatives.

He now has and has had for the last two weeks about four diarrhœic passages daily. He has severe attacks of cramp in the right iliac fossa every few minutes, requiring the constant use of large doses of morphia. These attacks are accompanied by a half inch elevation of the abdominal walls over the painful point. As the pain leaves, the abdominal wall descends, and gurgling of wind is heard and felt. He has been confined to his bed for two weeks and is greatly exhausted. There is no elevation of temperature, no tenderness on pressure, and there is no tumor felt, though carefully search for. There has been no vomiting at any time.

From the absence of vomiting and the marked tenesmus present, I regarded the obstruction as being in or near to the beginning of the large bowel; that it was not far from the ileo-cæcal valve was shown by the elevation of the abdominal wall at this point by the obstructed gas. The diarrhœa was an evidence of an intussusception, and the very short time the symptoms had existed, and the very complete obstruction present, pointed to a malignant growth as the cause of the intussusception.

Two days later I again visited Millville for the purpose of removing the growth. I was assisted by Drs. Newell and Smith, of Millville, Dr. Jones, of Camden, and Mr. Borsch, a student at Jefferson College. An incision about three inches long was made in the right iliac fossa, similar to the incision made in removing the appendix. On introducing the finger the growth was found at once. The intussusception could not be reduced, as the epithelioma had grown since it had occurred. After incising the bowel to verify the diagnosis, I removed about six inches of the intestine, including the obstructing epithelioma. Preparations had been made to perform lateral anastamosis at once, but the patient was so severely shocked that the operation was terminated by a temporary artificial anus.

He recovered without difficulty, rapidly gaining flesh and strength, and came to me, in Philadelphia, in June, to have the anastamosis operation performed. I placed him in a private room in the Jefferson College Hospital, and on the 16th I operated, assisted by Drs. Ashton, Fisher, Mr. Borsch, and the house staff. My purpose was to make a long opening, by the method devised by Dr. Abbé, between the lowest possible portion of the ileum and the highest and most convenient portion of the colon; to permit the artificial anus to remain as a safety valve and only close it after the anastamosis opening worked satisfactorily. In order to determine where to make my incision, I probed the bowel at the artificial anus, some days before the operation, with various sounds and catheters, and found it ran directly across the abdomen to the left iliac fossa. As I could not hope to join this to the ascending colon, I decided to use either the transverse colon or the sigmoid flexure, and to open the abdomen by a short incision to the left of the left rectus, as being within reach of both these portions of the large bowel and directly over the portion of the small bowel I wished to use but far enough from the artificial anus to escape the risk of infection. This was an error, the incision should have been made in the median line, rather higher than I did make it and long enough to get a fair view of the intestines.

Just before opening the abdomen I introduced a sound into the artificial anus, so that I might be able to verify, without delay, the portion of the ileum I wished to use after the abdomen was opened.

A three inch incision was made about two inches to the left of the median line and parallel with it, ending just above Poupart's ligament. The ileum, with the bougie in it, was readily identified, and as the transverse colon hung well into the wound, the sigmoid flexure was not searched for. After stripping