TRANSACTIONS OF THE PHILADELPHIA ACADEMY OF SURGERY.

Stated Meeting, March 6, 1893.

The President, Dr. WILLIAM HUNT, in the Chair.

AMPUTATION AT HIP JOINT FOR OSTEOMYELITIS.

Dr. JOHN B. DEAVER presented a case of amputation at the hip joint, done for osteomyelitis of the femur. At the time of the operation the patient was very much depressed from sepsis, consequent upon prolonged suppuration. During the amputation hæmorrhage was controlled simply by an Esmarch tube applied round the thigh, above the trochanter and along the crease of the groin, being retained here by two pieces of bandage, one passed beneath the tube in front and the other beneath the tube behind, each of which was held by an assistant. An oval flap of skin and fascia was made, and the muscles divided down to the bone by a circular sweep of the knife. The superficial and deep femoral arteries, with their accompanying veins, were next tied separately, as well as those of the muscular branches which could be recognized. The tube was next loosened a little, and the small vessels, as they bled, caught with hæmostats. The tube was now removed, and an incision carried from the external angle of the wound up over the trochanter and into the joint, dividing the capsular ligament, when the muscles were carefully separated from the bone and disarticulation completed. The amount of blood lost amounted to not more than two ounces. The advantage this procedure offers over the Wyeth method is in not dividing the femur before the disarticulation is made, and further, that the amount of blood lost is not any greater, and the vessels not being constricted for so long a time, there is less likelihood of consecutive bleeding.

INVETERATE NEURALGIA OF THE TRIFACIAL NERVE; COMPARATIVE VALUE OF OPERATIVE METHODS FOR ITS RELIEF.

Dr. JOHN B. DEAVER also presented specimens from a patient, a man, fifty-eight years of age, who at the age of thirty-four was first

attacked with neuralgia of the inferior dental nerve, which had followed the healing of a chronic sinus communicating with the right inferior maxilla. This pain continued at irregular intervals for six years, when he consulted a surgeon, who was supposed to have removed a section of the nerve near the dental foramen. Very little, if any, relief followed this operation, when a second was performed by the same surgeon one year later; this was followed by relief for one year, when he had another attack of the pain. He now came under Dr. Deaver's care, who trephined the inferior maxilla over the angle and removed a section of the inferior dental nerve. This was followed by relief for a period of fifteen months, when the pain again returned. He now opened up the field of the old operation, exposed the proximal end (stump) of the nerve, excised a part therefrom, chiseled away the roof of the remaining portion of the dental canal, and removed the distal portion of the nerve as far as the mental foramen. This was followed by relief for sixteen months, when the pain returned, being referred, in addition to along the course of the inferior dental, along the side of the tongue. He now simply cleared out the field of the old operation, but this was not followed by any marked relief. He again operated, this time taking out a vertical section of the ramus of the jaw as far as the sigmoid notch, and removed a further section from the proximal end of the inferior dental, and at the same time a section from the gustatory nerve. This was followed by relief. He purposely refrained from taking a section from the inferior maxillary nerve immediately after it passes through the foramen ovale, also from performing an intracranial operation, not being convinced that these more radical procedures are warrantable until the milder ones have been done without success. He recalled a number of cases, both of neuralgia of the inferior as well as of the superior maxillary nerve, where he had followed the course adopted in the present case in relapsing attacks, with such satisfactory results, that he was convinced that a longer period of relief from pain is offered the patient thereby than would result, perhaps, by the more radical operations.

Dr. J. E. MEARS said that in one case he had removed two and one-half inches of nerve and submitted it to Dr. DeSchweinitz for examination, and the condition found was that of fatty degeneration. It seemed to him important that study should be directed toward ascertaining, if possible, what the pathological condition is in these cases of trifacial neuralgia; operative procedures appear in most cases to be hopeless so far as permanent relief is concerned.

Last spring the members of the American Surgical Association were shown in the Massachusetts General Hospital the results in five or six cases of operations upon the second and third divisions of the fifth nerve for neuralgia. In these cases an incision had been made over the temporal region, the muscle cut through and the zygoma divided. By pressing the tissues down firmly the operator was able to reach the second and third divisions as they emerge from the foramen rotundum and ovale. In these cases the relief had extended, he believed, over three or four years, and in one case five or six years.

If the disease is of central origin no operation on the peripheral terminations of the nerves can be of service. Repeated operations give temporary relief.

Dr. W. W. KEEN quite agreed with Dr. Mears that the question of the pathology is a most important one. In the cases where he had had microscopical examinations made the change had been found to be one of sclerosis. In one case there were spots of distinct hæmorrhage into the nerve. These were almost microscopic. He had never seen the inferior dental nerve so large as it was in this case. That patient had a return of the pain, and a second operation was done. So far as he could determine, a new nerve had formed, and, strange to say, there was a branch of this nerve which went inward through a foramen on the inner surface of the jaw, which foramen he had not seen at the first operation. Dr. DANA some time ago published a paper in which he stated that he had found sclerosis of the vessels rather than of the nerve. However this may be, it seemed to him clear that the sclerosis of the vessels or of the nerve is the chief thing, and that this is distinctly a senile change. It does not appear in early life, but only in later life, when sclerosis of other organs appears. This being the case, the operation of choice should always be the peripheral operation. He would not think of endeavoring to remove or break up the Gasserian ganglion as a primary operation. He had been told recently that one of Mr. Rose's cases had shown symptoms of return, and this is what might be expected, as the sclerosis begins rather in the periphery and works backward. While medicine offers no benefit in the majority of cases, as a rule the patient may be assured that an operation will afford at least one or two years of relief. He presumed that some of Dr. Deaver's operations consisted simply in reaming out the connective tissue about the stump of the nerve. This Dr. Keen had done in more

than one case, and, although under the microscope no nervous tissue could be found in the material removed, the operation gave as much relief as followed a pure exsection of the nerve. This being the case, it seemed to him that surgeons should, as a general rule, endeavor to give relief by such a simple operation, rather than immediately to go to the foramen rotundum or ovale or within the skull and remove the Gasserian ganglion.

Dr. Deaver had referred to destruction of the ganglion as not a serious operation. Dr. Keen considered it quite a serious operation, although there have not been a large number of deaths. Rose has done it six or seven times, with one or two deaths. Andrews four times without a death. Hartley once with recovery and Dr. Roberts once with recovery. Besides this, two eyes, and possibly more, have been destroyed. Any operation involving so much traumatism is to be considered a very serious operation, and should not be undertaken except after the gravest consideration.

Dr. JAMES M. BARTON called attention to cases in which small aneurisms had been found in the diseased nerves. The results of the ligation of the external carotid for this affection lend support to the presumable frequency of such a pathological condition in neuralgias. Nussbaum claimed that one-half of the cases are permanently cured.

He also confirmed what had been said by Dr. Keen. The most trifling operation on the nerve, the slightest stretching, even the division of the distal branches, is apt to afford temporary relief, and the most serious operation will not do much more.

So rare, in his experience, had anything like permanent relief followed operations, that he had exhibited before the Society a few months before as something unusual, a case of neuralgia of the second branch, of thirteen years duration, in which after removal of the nerve at the foramen rotundum relief had continued for five years, the man being still free from the disease.

Dr. THOMAS G. MORTON said that he was at present attending a patient, who is now eighty-two years of age, on whom he had operated some twenty years ago. After the excision he had entire relief for many years; then had a recurrence of pain, brought on apparently by a ride of five miles in a wagon which had no springs, in which he was severely jolted.

For the last ten or fifteen years, although enjoying, indeed, robust health, he has at times suffered intensely, and then, again, having entire immunity from pain. Now the suffering is only relieved

by morphine injections. Swallowing, talking, any movement of the tongue, touching the skin of the face, or even the beard, provokes "thrusts of pain."

In another case—now more than twenty years since the operation—the patient has had entire freedom from pain. As a rule, sooner or later pain reappears; but in such cases there is no reason why the operation should not be repeated. Benefit is generally experienced from each operation, and for even a measure of relief patients are willing to submit to any treatment.

FRACTURE OF THE THYROID CARTILAGE.

Dr. WILLIAM J. TAYLOR reported a case of fracture of the thyroid cartilage. The patient, Charles E., aged forty-three years, was admitted to the surgical ward of St. Agnes Hospital on October 6, 1892, in a semi-conscious condition, having fallen a distance of about twenty feet from a scaffold upon which he had been working. No one saw him fall, but when he was discovered he was unconscious and lying across a heavy piece of wood. He was very much shocked. The right side of his face was badly contused, the right eye closed. He was bleeding from the nose, mouth and left ear, and his general appearance was that of a man suffering from a fracture of the base of the skull. The pupils were equal, and a very careful examination showed this diagnosis to be an error. He had great difficulty in breathing, could not swallow, the saliva ran out of the corners of his mouth, and when he attempted to speak his voice was husky and his articulation very indistinct; he could not speak above a whisper, and only that with the greatest pain and difficulty. There was little or no swelling of the neck, but when he regained complete consciousness he complained of great pain and discomfort in the throat.

A careful examination now revealed a fracture of the thyroid cartilage on the right side, extending from above downward about on a line with the insertion of the thyro-hyoid muscle and about two lines anterior to it. The amount of displacement was very slight, but the mobility of the fragments could be easily demonstrated and the fragments displaced and replaced again by manipulation with the fingers.

There was also a rupture of the tympanic membrane about at the extremity of the manubrium process of the malleus. The nose showed hæmorrhagic points on the septum on both sides.

Dyspnœa was pronounced, but there was apparently no emphysema about the seat of the fracture or in the neck. His symptoms were severe and the pain and discomfort very great, but not so great as to demand immediate operative relief. No attempt whatever was made to apply a dressing. For some days the bleeding from the mouth persisted, and the difficulty in swallowing and dyspnœa continued, but gradually lessened and by the end of three weeks was entirely gone. His voice still remained somewhat husky, but there was no longer pain or difficulty in swallowing. The left ear was treated by cleaning out the auditory canal with cotton and insufflating daily aristol and boric acid.

The President, Dr. HUNT, remarked that he had studied the subject of fractures of the thyroid cartilage some years ago, and his conclusions then were that in cases in which emphysema and bloody sputa were present there had been up to that time no recovery where tracheotomy had not been performed. He thought that tracheotomy should be done when the first symptoms were discovered. He found several cases similar to that reported by Dr. Taylor in which recovery followed without tracheotomy.

MULTIPLE FRACTURES OF BONES.

Dr. TAYLOR reported the following case: A woman, aged fifty-six, was admitted to St. Agnes' Hospital on the evening of October 19, 1892, suffering from multiple fractures of both upper extremities. She was going down a cellar stairway in the dark when she missed her footing and fell to the bottom, some eight or ten steps.

Upon examination it was found that she had received a lacerated wound of the scalp, six inches long, and extending down to the bone, and a deep lacerated wound of the lower lip about two inches in length. There was a fracture of the surgical neck of the left humerus, and an oblique fracture of the middle one-third of its shaft; a contusion of the left elbow, and a fracture of the lower end of both the radius and ulna of the same side. There was a supra-condyloid fracture of the right humerus extending into the elbow joint, forming a T. A fracture of the upper third of the radius and of the ulna, and a fracture of the lower end of the radius. In spite of this great number of fractures, and of the serious lacerated wounds, she was able to walk into the hospital, and seemed to suffer comparatively little pain. Her temperature was normal, her pulse good, and there was

no evidence of shock, such as would have been expected from the nature of her injuries.

There was much difficulty experienced in adjusting and holding in place the different fractures, but with care and patience and plenty of plaster-of-Paris this was accomplished. Her recovery has been most satisfactory, and she has for all practical purposes full use of both arms.

Such an extensive number of fractures led him to suppose there must have been some serious lesion of the bones, but the most careful inquiries failed to give him any clue to such a state of affairs. She was a large, strong, and, apparently, perfectly healthy woman. She had never before had a fracture of a single bone, neither was there any history of fracture in any member of her family. She was born in Ireland, and had lived there until a few years ago, and had always been in good health and a hard worker.

Dr. H. R. WHARTON asked the experience of members in regard to multiple fractures, whether they had found much constitutional disturbance, or many cases of sudden death following multiple fracture. His own experience had been that generally patients do well. Last summer he had had under treatment a boy, six years old, who had fallen, and sustained a compound fracture of the nose, fracture of both bones of each forearm, and fracture of both thighs about the middle of the shaft. The patient did perfectly well with normal temperature for a week. He was doing well when he saw him at 12 o'clock noon. In the evening of the same day the resident noticed that his breathing was peculiar, and an hour afterward the patient was moribund. He died of cerebral complication. Possibly, it was a case of fat embolism, which is said to follow fractures. He had seen another patient die very much in the same way with a simple fracture of the femur. No post-mortem was made in either case.

Dr. THOMAS G. MORTON, some years before, had seen in consultation a lady, eighty-four years of age, who had gradually during ten years lost her vision from cataracts. Soon after this she sustained in a fall a fracture of both bones of the forearm, the humerus about the middle, and the shaft of the femur near the great trochanter. Complete recovery from these injuries following showed such an excellent repair that six months afterward he had operated upon both eyes at the same sitting. Perfect vision followed in each, which continued until her death when in her ninety-seventh year.

METATARSALGIA (MORTON'S PAINFUL AFFECTION OF THE FOOT).

Dr. THOMAS S. K. MORTON read a paper with the above title, see page 680.

Dr. W. W. KEEN remarked that he had only seen one case of this affection, the patient having been a lady, on both of whose feet he had operated five years ago. Since then she has been able to walk perfectly well, and to dance.

Four years ago he himself had an attack, which he thought might be the same. He had every symptom that Dr. Morton has described. The attack came on about the time of his summer holiday, and he was unable to walk without limping from the excessive pain. When the pain came on he was compelled to go to his room, or sit down wherever he happened to be, and remove the shoe. He had a pair of shoes made with a thicker and wider sole, and a little larger, but without relief. Dr. J. C. Wilson suggested a gouty origin, and put him on appropriate treatment, and the pain disappeared, and he had been perfectly well ever since.

Dr. THOMAS G. MORTON said that as early as 1870 his attention was first directed to this painful affection of the foot, and he then felt satisfied that he had a malady which had not previously been described. In the *American Journal of the Medical Sciences*, for January, 1876, he published an account of this painful local affection, and subsequently reported a number of cases which he had successfully operated upon. Later, in various journals, the subject received attention, until at present the disease is generally understood. In 1891, Dr. E. H. Bradford published an interesting account of a number of cases which had come under his care, and more recently numerous authors have given their experience.

A medical man from Hagerstown, Md., once called upon him and stated that he was seeking for relief from a neuralgia of the foot, which was so terrible that he was willing even to submit to amputation of the limb. The only relief he obtained was by injections of morphia. The operation was completely successful, and the doctor went to his home on the third day afterward, and has never had any pain since.

Dr. Morton had generally found the disease in one foot; but occasionally in both, and had often operated on both feet at the same sitting. Now and then he had amputated the toe instead of resecting the

joint. The pain in many cases is slight, and only requires a proper shoe and a flannel bandage to keep the toes from rolling; in others nothing except an operation will suffice.

The question has been raised as to whether the painful nerve might not be excised instead of excising the joint of the toe. He apprehended there would be great difficulty in finding the nerve, and unless all the soft parts surrounding the joint were removed, some branches would remain; while if the pain is due, as he thinks it is, to the peculiar relation of the fourth joint as compared with the third and the fifth, no treatment except joint removal will answer.