

that it was useless to be treating the wife, as the fault was not with her, but with the husband, and that it was a family peculiarity. She was a second wife, and had never been pregnant. Her husband's first wife, although a healthy young woman, had never been pregnant. My patient's husband's first wife had been a young and healthy Italian woman. She had never been pregnant; and so it ran through the family. Husband claimed to have been free at all times from disease of a specific character, showed no results of previous disease, and was free from malformation of any kind. Microscopic examination of semen showed an entire absence of spermatozoa, as in Case No. 1.

In discussing this subject with gynecologists, I find that some of them insist on investigating the husband's condition, and satisfying themselves that he is all right before submitting the wife to treatment, unless there is manifest disease which would prevent conception. I think this a wise precaution in many cases.

THE PERMANENT OR LATER RESULTS OF FRACTURES OF THE SKULL.¹

BY WILLIAM N. BULLARD, M.D.

THIS paper, which is intended only as a preliminary one, is the result of investigations in regard to the present condition of patients who were formerly in the Boston City Hospital with fracture of the skull. The diagnosis is taken from the hospital records and in most cases was evident.

I will not enlarge on the difficulty of this investigation except to say that it has occupied much of my time personally during portions of the past three years. I have attempted to find each patient, and have not accepted any records except from the patient himself or some person whom I believed fully competent to state his physical condition. Of course, very many persons were sought for who could not be found, and it was unusual when any one was found at the address given when at the hospital.

In undertaking this work I had hoped to be able to throw some light on the question as to whether the future condition of the patient with fractured skull were better with or without operation, and under what circumstances operation was advisable. Unfortunately the statistics obtained are too few to obtain any definite answers to these questions, but they may be of value to us as making a beginning in this direction, as well as in other ways. It seems to me that hitherto our views have been influenced by general considerations and by special conditions rather than by definite knowledge derived from a large number of carefully followed cases.

The number of patients in regard to whom information has been obtained is 70: male adults 44, children 15, female adults 2, children 5; age unknown 4 (3 males and 1 female).

The location of the fractures is as follows:

Base	19
Vertex	48
Frontal region	15, right 11, left 4.
Parietal region	19, " 9, " 10.
Temporal region	5, " 3, " 2.
Occipital region	9, " 6, " 3.
Unknown	5

¹ Read before the Surgical Section of the Suffolk District Medical Society, March 3, 1897.

Operations, that is, trephining or some serious surgical interference, occurred in 15. In 54 there was no operation. In one it is unknown whether there was an operation or not.

The longest time which has elapsed in any case between the time of injury and the time of examination is forty-seven years in one case. The next longest is fifteen. In nine patients the time elapsed was between ten and fifteen years; it was between five and ten years in 24 patients; it was four years in five patients; three years in nine cases; two years in nine cases; one year to eighteen months in eight cases; nine months in two cases; and in two cases the time elapsed was unknown, but it was at least several years.

In estimating the results of fractures of the skull, I have not taken into account the paralyses produced at the time of injury, for these are apt to be obvious, and their duration and severity can usually be determined with some degree of probability before the patient leaves the hospital. (There were noted, however, three cases of hemiplegia.) My object has been rather to draw attention to those symptoms which, while less obvious at first, later interfere with the patient's comfort, or ability to work and earn his living. I wish to consider these both in relation to the patient's condition and also in relation to the method of treatment at the time of injury.

Out of our 70 patients, 37 presented *no* symptoms due to the injury, when examined. Of these one was examined nine months after the injury, three one year after, four at two years after, five at three years after, five between three and five years, ten between five and ten years, and the rest more than ten years after, except for two cases in which the time was unknown, but in each it was several years.

Eight patients presented symptoms which were slight or insignificant.

Eighteen patients presented symptoms which were troublesome, but which would not prevent them from earning their living.

Seven patients presented serious symptoms.

In all the cases with serious symptoms there was mental trouble. I will mention these cases in detail.

CASE I. Male, forty-eight. Had fracture of the base of the skull. No operation. He seems to have been a hard drinker before the accident, but after the injury small amounts of alcohol affected him to an extreme degree, so that he would become so violent that his family were afraid of their lives and were obliged to leave him two or three times. When not under the influence of alcohol he was peculiar; "crazy since the injury." He died six and one-half years after the injury of tuberculosis pulmonum.

CASE II. Male, twenty-six years old when injured. Is now at the State Hospital for Dipsomaniacs at Foxboro; seven years after injury. He had been a hard drinker for some years previous to injury, and has continued to be so since. His mental symptoms are melancholy and hallucinations of sight and hearing. It is extremely doubtful whether they are connected with the injury, which was in the left frontal region. There was no operation.

CASE III. Male, ten years old at time of injury. Fracture in right frontal region. No operation. It is now fifteen years since the injury. He is said by his mother to be peculiar. Is "hasty," and probably at times rather violent. Is not addicted to alcohol,

but if he takes any shows its effects more quickly than natural. Has never been the same since the accident. Has a sister who is insane, and her insanity is attributed to the same accident. Is a plumber and able to work.

CASE IV. Male, fifty. Fracture of left parietal. No operation. Thirteen years after injury. Wife states that he has never been the same since the accident, has been less active minded. Was stupid for a time after leaving the hospital, but gradually improved. No headache, vertigo, deafness or tinnitus. Is at work; is a laborer.

CASE V. Male, fifty-five. Laborer. Fracture of left parietal. No operation. Became childish after accident. Was unable to work for a year, and died three years after injury of chronic bronchitis.

CASE VI. Female adult, age unknown. Fracture of base. No operation. After injury her mind was affected, was melancholic, and would sit all day doing nothing. This person was probably alcoholic.

CASE VII. Male, twelve. Fracture of base of skull; hemorrhage from right ear. Eighteen months after injury is slightly deaf; no tinnitus; has headache and dizziness at times. Cannot learn at school since the injury.

The symptoms in the second of these cases are undoubtedly due to alcohol, and those in the fifth and sixth probably so, at least in part. In the third case there is an undue excitability of moderate severity, while in the fourth and seventh we find the opposite, an abnormal mental slowness or stupidity and an inability to learn. In neither of these last two adults (III and IV) were the troubles severe enough to prevent them from working. In the remaining case the patient was said to have become childish.

The only other case where severe symptoms, other than paralysis, were recorded was that of a man seen forty-seven years after a fracture of the right frontal, which had occurred when he was eight years old. He had convulsions daily for a time, but had had only one during the past twelve years. He presented himself at the hospital on account of a posterior sclerosis of the spinal cord not connected with his injury.

The symptoms most frequently found after fracture of the skull in our cases, are, however, headache, vertigo, deafness, and a condition of the brain which shows itself by the extreme susceptibility of the patient to the effects of alcohol. This latter condition is probably present in a large proportion of cases, although not always mentioned.

Headache occurred in twelve, not counting one in which it was noted as rare and another in which it was not common; as a rule, it is not severe or troublesome and does not interfere with work. In two of the cases counted the patients were alcoholic, and it was doubtful how far the injury was the cause of the pain. In three cases the headache was unilateral and on the injured side of the head.

The only case in which the headache was troublesome was that of a man fifty years old at the time of the injury, who had a fracture of the posterior parietal region and of the base. The examination was made fourteen months after injury. He was deaf and troubled with dizziness, and had a constant diffused headache. He was probably alcoholic, so that the cause of the headache was not certain.

In only one of the cases in which headache occurred had an operation been performed, and even in this case

the cause of the headache was doubtful. The injury, which was a fracture of the anterior portion of the left parietal, occurred in a girl six years old. Some fragments of bone were removed and depressed bone elevated immediately after the injury. She was seen nine years later. Her family circumstances had been unfortunate and her inheritance poor. She had been subject to attacks of violent excitement or anger. Three months previous to my visit the headaches had ceased with the appearance of the catamenia.

Dizziness, or vertigo was found in thirteen cases, and in one other it was reported as having existed for two months after leaving the hospital and having then ceased. In three cases it was noted as slight. In one it was unilateral. In two cases it existed in company with tinnitus, and in five cases in company with deafness. Curiously, the tinnitus and deafness were not found in the same cases.

Too much stress cannot be laid on the location of the fractures in cases which are not examined post-mortem, because it is often impossible to determine where the cracks and fissures extend, and it is impossible to exclude other fractures than those noticed.

In the cases of headache, four of the fractures were of the base, four of the frontal and three of the parietal regions, while one was in the region of the posterior fontanelle. Of the doubtful cases one was a fracture of the base, one of the frontal and one of the parietal regions.

In the cases which suffered from vertigo, two of the fractures were in the frontal region, five in the parietal, one in the occipital and six were of the base. In none of these cases had any operation been performed.

Deafness was found in nine cases, in two of which it was noted as slight, and in another it was said to be diminishing. In one case it was bilateral. In four it coexisted with headache and in five with dizziness. In every case where there was deafness and headache there was also vertigo; thus there was only one case in which there was vertigo and deafness without headache. The seat of fracture was at the base or in the bony wall of the ear in six cases; in two it was seen in the occiput and in one the fracture was in the frontal region. As mentioned above, the site of fracture found during life does not show the real extent of the injury. We should naturally expect deafness to occur, principally in fractures of the base, or in such as involved the petrous portion of the temporal bone. In only one of these cases was an operation performed at the time of injury.

Tinnitus was not complained of in any of the cases in which there was deafness. It occurred only twice, and both times in company with dizziness. There was no operation in either of these.

In three cases a sensation of drawing or pulling in the wound was complained of, and this occurred chiefly when the head was in such a position as to cause the brain to sink away from the wound. Two out of the three complained of it especially at night, and said that it kept them awake. This symptom is probably more common than would appear from these statistics. Many of those who have it to a slight degree do not mind it much, and do not speak of it. There was no serious operation in any of these cases: in one some loose bone had been removed.

One of the above cases also complained of a sensation about the wound as if a piece of leather were tacked over it. One patient who had also headache,

complained of a "funny feeling about the head" for some time after the injury, which, when he was seen seven years after the injury, was slight and not troublesome.

In almost all the patients we find an increased susceptibility to the action of *alcohol*, often very noticeable.

CONCLUSIONS.

(1) Out of 70 persons with fractures of the skull, 37 presented no symptoms when examined some time later.

(2) Seven persons only presented serious symptoms, and in at least four of these it is doubtful whether the symptoms were due to the injury.

(3) The most frequent consequences found were headache, deafness, dizziness, and inability to resist the action of alcohol on the brain.

(4) Out of the 15 cases in which operation (trephining, etc.) was performed, 12 had no symptoms; in another it was doubtful whether the symptoms present were due to the injury; in another the symptoms were slight (headache rare, tension over wound while lying in bed); the other was deaf, but had no other trouble. We are justified, therefore, in concluding, so far as our statistics lead, that those cases in which trephining was performed have shown much better results, as far as the symptoms discussed are concerned, than those in which no operation was performed.

Clinical Department.

CASES OF MALIGNANT ADENOMA OF THE UTERUS, VAGINA AND RECTUM; WITH REMARKS UPON THE SURGERY OF THIS FORM OF MALIGNANT DISEASE.¹

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OPERATIONS, even the most extensive possible, for cancer of the rectum and uterus are followed so frequently by hopeless recurrence that they must always be undertaken with reluctance and misgivings. When, however, the disease is of those less malignant types which are slow to invade remote structures the prognosis after thorough removal is so bright that even the most extensive mutilations are justifiable.

The malignant adenomata of the uterus, for example, present after thorough removal the most encouraging outlook. I recall several cases of this disease in which hysterectomy was performed long before the growth had penetrated from the mucous surface of the fundus, where it had originated, to the peritoneum. In these cases there was no return of the growth. It was only when the disease had already invaded contiguous structures that extirpation of the uterus was followed by a fatal recurrence. In cases of malignant adenoma of the rectum also, thorough extirpation has been followed in my experience by permanent cure. In such cases the recurrence, if any takes place, is localized, and the progress slow.

Whatever the views of the pathologists may be as to the course of the so-called malignant adenomata, clinical experience seems to indicate a prognosis much more hopeful than that of ordinary cancer. I recall

¹ Read before the Obstetrical Society of Boston, January 19, 1897.

one case in particular which has encouraged me, even under the most unfavorable conditions, to remove the uterus when the diagnosis of malignant adenoma of the uterus had been made.

CASE I. Mrs. W. H. K., aged forty years, a patient of Dr. Andrews of Gardner, Mass., was married at nineteen. She had been as well as the average girl. After her second confinement, from which she got up very slowly, she began to have excessive flowing at the menstrual periods. The periods themselves became more frequent, and the exsanguination finally was extreme. On April 26, 1894, I found the patient greatly emaciated and anemic. The uterus was filled with a friable bleeding mass, which I removed as thoroughly as possible by means of a curette. Dr. Whitney pronounced the scrapings to be fragments of a malignant adenoma. On May 17, 1894, I removed the uterus through the abdomen. The fundus was filled with masses of the disease, which had not, however, penetrated to the peritoneum. At the operation no evidence of metastasis was found. A good recovery followed. In the first sixteen weeks she gained sixteen and a half pounds. On February 6, 1897, I saw the patient in perfect health.

Dr. Whitney's report is as follows:

HARVARD MEDICAL SCHOOL,
May 16, 1894.

DEAR DOCTOR:—The examination of the uterus from the case of Mrs. K. showed a large infiltrating growth ulcerating on the surface, with slightly raised, fungous edges. This occupied the cervical region, which was elongated and hypertrophied.

Microscopic examination showed the same characteristic as the scrapings, namely, irregularly shaped glands infiltrating the tissues. The limit between the growth and sound tissue is much sharper than in the cases of a similar character which have had their origin in the fundus of the uterus.

The diagnosis is a malignant adenoma starting from the cervical glands.

Yours very truly,
W. F. WHITNEY.

CASE II. A case of malignant adenoma of the rectum, that of Mr. J. A. R., aged forty-seven, pursued also a favorable course. This man, a jeweller, came to me November 22, 1890. He had had, in the preceding September, without apparent cause, an excessive hemorrhage from the rectum, accompanied by attacks of fainting. On October 19th he had another hemorrhage. He had been troubled for four or five years with constant diarrhea, accompanied by pain dating from service in the war. I found an ulcerated tumor situated in the posterior wall of the rectum, about two inches above the anus. The first operation, that of curetting and burning, was performed in 1890. On February 17, 1891, I removed the mass thoroughly through the dilated anus. Dr. Whitney pronounced the disease a malignant adenoma of the rectum, and gave a hopeful prognosis. In November, 1895, I saw the patient at his place of business in Amherst. He reported himself as perfectly well, and his looks confirmed his statement.

CASE III. Encouraged by cases like the preceding, I advised operation in the case of Miss L. M., aged forty, who had had for about a year some internal trouble which she thought to be connected with the uterus. She consulted Dr. — who found a small growth in the left side of the vagina near the cervix. This tumor was removed by Dr. — on December 11, 1894. It was pronounced a malignant adenoma