

THE

Journal of the American Medical Association.

EDITED FOR THE ASSOCIATION BY N. S. DAVIS.

PUBLISHED WEEKLY.

Vol. VII.

CHICAGO, NOVEMBER 20, 1886.

No. 21.

ORIGINAL ARTICLES.

THE TREATMENT OF ANAL FISTULA ASSOCIATED WITH PHTHISIS.¹

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The surgeon who operates in the phthical subject for fistula *in ano*, is almost certain to be placed in an embarrassing and false position if his patient makes a slow recovery. Excellent practitioners will often believe that there has been meddlesome interference, and with apparent justice, since authors in treating of fistula in conjunction with phthisis have generally taught that operative interference is unwise, as certainly resulting in injury to, or often hastening the death of the patient. This opinion has been strengthened by the fact that this has been held as an axiom of both professional and popular belief from an early day, and is probably now held by the majority of physicians. While a firm adherent to the belief in the value of operative interference in proper cases, it has been my intention to examine this subject and to impartially state the conditions of the present belief and practice of those of great experience; believing that by such a course I can better carry conviction than by a mere statement of personal opinion and experience. To this end I addressed letters of inquiry to members of the profession, and have been favored with a response so general, so widely distributed, and from many of such professional eminence, that it is but just to say that it reflects the views held at present by the representative men of the profession in the United States. In only one instance do I give the opinions of a foreign surgeon. Mr. Allingham, the distinguished rectal surgeon of St. Mark's Hospital, London, has given his views, and being of more recent date than his published writings, I do not feel that they should be suppressed.

The exact number of cases reported cannot be given, many having kept no notes, but can be safely placed at above 2000.

Question 1—Were you satisfied with the results in these cases? This is answered in the affirmative by D. Hayes Agnew, John Ashhurst, Jr., John H. Brinton, J. Solis-Cohen and S. W. Gross, Philadelphia; Robert Battey, Rome, Ga.; R. B. Bontecou, Troy,

¹ Read in the Section on Surgery at the Thirty-Seventh Annual Meeting of the American Medical Association.

N. Y.; R. Beverly Cole and Levi C. Lane, San Francisco; George J. Cook and Joseph Eastman, Indianapolis, Ind.; Edward Borck, Geo. J. Engelmann, E. H. Gregory and T. F. Prewitt, St. Louis; Frank H. Hamilton, Charles B. Kelsey, Louis A. Sayre and J. Williston Wright, New York; Moses Gunn and Alfred S. Houghton, Chicago; Henry O. Marcy, Boston; C. H. Mastin, Mobile, Ala.; Jos. M. Mathews, Louisville, Ky.; Richard C. Moore, Omaha, Neb.; A. M. Owen, Evansville, Ind.; N. Senn, Milwaukee, Wis.; J. N. Taylor, Corinth, Miss.; Theodore R. Varich, Jersey City, N. J.; James T. Whittaker, Cincinnati, O.; J. S. Wight, Brooklyn, N. Y.

Edmund Andrews, Chicago, Hunter McGuire, Richmond, Va., W. F. Peck, Davenport, Ia., Thaddeus R. Reamy, Cincinnati, O., and J. C. Wilson, Philadelphia, answer, yes, as a rule. Borck: yes, and so were the patients. Varick: In every case benefit has resulted. Allingham: I have operated in many hundreds of cases with good results, due precautions being observed as to bad weather, constant cough, or far advanced disease. Sayre: I have operated on a very large number of cases who were far advanced in phthisis. In every instance the operation proved beneficial. Owen: I have been so pleased with the results of the operation, that I have much to say in its favor, and nothing against it. Cook: The reasons given for opinions in opposition to operating, are various and contradictory. Alex. Y. P. Garnett, of Washington: In the majority of those operated upon the result has been satisfactory, by the removal of a painful and suppurating ulcer, so situated as to render locomotion painful, and the sitting position uncomfortable. Brinton: I have not been dissatisfied; I believe the operation proper. Samuel Logan, of New Orleans, and J. Williston Wright: Yes, as I have not operated indiscriminately. Ashhurst: I have never seen any particular harm result from the operation. Engelmann: Perfectly so for the time being; anal trouble completely relieved, but rapid fatal termination of the disease followed. Charles Denison, Denver, Col.: I have never operated, but I have not been at all satisfied with the results in the hands of others. B. F. Swafford, Terre Haute, Ind., answers no.

Question 2—Excepting where the cough is constant or where the pulmonary disease is either rapidly advancing or far advanced, do you think it advisable to operate in this class of cases? This is answered, I do, by Agnew, Allingham, Andrews, Brinton, Wm. Brodie, Detroit, Mich., Borck, Bontecou, Solis-Cohen,

Cole, Cook, Francis Delafield. New York, Eastman, Engelmann, Gunn, Hamilton, E. Fletcher Ingals, Chicago, Lane, D. A. Linthicum, Helena, Ark., McGuire, Mathews, Moore, Owen, Prewitt, Peck, Reamy, Sayre, T. G. Richardson, New Orleans, and John Roberts, Philadelphia. Wight, Wilson, Varich, and Taylor: Operate early and freely. Agnew: Always cure the fistula if you can. The only question I propose to myself in operating for fistula in consumptive cases, is the following: Are the reparative powers of the patient equal to the work of healing the wound? Believing as I do that such sores have no safety-valve or derivative effect-office by which disease is attracted from the pulmonary organs, I have no hesitation in recommending that they be cured as quickly as possible. Cook: The only question to me is, the nutrition of the patient. Gunn: Yes, my experience teaches me that the cure of a fistula is not contraindicated in patients with a predisposition to, or with actually present consumption, in its earlier stages, if the proper means are taken to combat such predisposition or disease. Marcy: I believe the rationale of the older views is untenable, and because a man is afflicted with one disease to refuse to cure him of another is as irrational as it is cruel. Delafield: My own belief is, that two diseases are worse than one. Wright: Yes, on the ground that phthisis alone is better than phthisis and fistula combined. Solis Cohen: The operation is indicated on the general principle of relieving any source of irritation amenable to interference. I have not met with any unfavorable results. Kelsey: I believe it to be a safe rule to operate upon phthisical patients as upon others, being led by the idea that one exhaustive disease is better than two. No cautious practitioner would think of operating in either rapidly advancing or far advanced lung trouble. Cook: I have never yet had occasion to regret an operation, but have seen very great benefits result from checking the discharge. Ingals and Wright: Yes, the patient is more comfortable. Brodie: I can see no objection to operating if the patient has phthisis. Gregory: If the fistula give much discomfort I operate. I always operate when the disease annoys the patient. I should treat as under ordinary circumstances. Ashhurst: I do not operate unless the distress and annoyance from the local affection are greater than from the constitutional condition. Senn and Whittaker: If the disease is attendant with pain and discomfort.

Dr. Andrews says: If the irritation and discharge be slight, and the patient is liable to die in a year from phthisis, there is no very strong motive to submit to an operation. There is no ground on which one can strongly urge an operation to a phthisical patient. Battey: If the patient is suffering locally, yes—if not—no. Logan: Yes, but not where fistulous sinuses are very numerous or extensive, especially if the patient be weak. Garnett: I would not advise surgical interference in the early or incipient stages of phthisis, unless the local trouble occasion great inconvenience and pain, the chief object of the operation being to remedy these. Gross: My rule of practice has been to operate if the lung symptoms

were slight, and the fistula gives rise to much annoyance or local distress. Allingham: I consider reckless operating very harmful, the wounds will generally heal, but the low reparative power makes healing a lengthy process; breaking down of the parts often takes place. The cough I consider very harmful, as this occurs in or during other conditions not phthisical. Matthews: It must be born in mind that there is a vast difference in fistulæ. Some may exist for years even in consumption, and cause but little distress, others are progressive and destructive, and if left alone will do incalculable harm in a very short time. Again, a very small sinus, if situated in proximity to the sphincter, will cause great pain that can only be relieved by an operation. Marcy: I have for years advocated and performed operations for the cure of fistula in consumptives. Devitalization by disease renders one a poor subject for surgical repair. Nevertheless, I have, as a rule, seen tuberculous subjects operated on do well and improve generally after being cured of another and a serious infirmity; locally a cause of suffering and a drain upon the health. Denison, Roberts, and Swafford, answer, I think not.

Question 3. Do you think that you would operate in cold or damp weather, when the patient must be confined to his room? Andrews, Brinton, Solis-Cohen, Eastmann, Houghton, Owen, Roberts, Swafford, Senn, Varich, Whittaker and Wilson answer: I would operate at any time. Bontecou and Gregory: Should not be very particular as to the time. Garnett: The weather would not enter into consideration with me as an important factor, except that of extreme heat. Andrews: Yes, better confine him for a few days anyhow. Gregory and Reamy: Yes, if the case demanded immediate relief. Mastin and Wright: I would prefer to wait for good weather, in order to avoid the dangers incident to confinement in such cases. Cole and Cook: In winter I would prefer to wait until spring. Borck, Cohen, Linthicum, McGuire, Peck, Prewitt, Taylor and Wight: I would prefer clear dry weather. Mathews: If it was a progressive one and caused great pain and inconvenience, I would operate with this disadvantage present. Roberts: I think not. Logan: Not as a rule. Allingham, Battey and Engelmann: No, I would not.

Question 4. Will the wounds heal in nearly every case? If not, why? From low reparative power, because of the concussion from coughing or what reason? Andrews, Allingham, Battey, Bontecou, Borck, Brinton, Cole, Cook, Eastman, Engelmann, Gregory, Garnett, Hamilton, Houghton, Ingals, Mathews, Mastin, McGuire, Moore, Owen, Prewitt, Peck, Reamy, Sayre, Senn, Taylor, Varich, Whittaker, Wilson and Wight, answer, yes. Battey and Sayre: Yes, it has never failed me. Bontecou and Logan: Unless the patient is reduced too low. Engelmann: They seem to heal as well as in other cases, especially if the operation is done antiseptically. Senn: Yes, if the operation is thoroughly done. Owen: I have had several cases where the cough was so constant that sleep was not known without opiates, that were relieved by the operation. Kelsey: Cough

when violent and frequent is a decided contra-indication, interfering as it does, very certainly with the healing of the wound. Ingals: Yes, when done early in the disease. McGuire: The wound is healed kindly unless the disease is advanced and the powers of life low. Allingham: They heal slowly, but generally heal in my cases. Hamilton: They heal slowly. The fact is, there is some danger that they may never be made to heal. Cook: I think that there is but one question to decide in order to determine the propriety of an operation; that is the question of nutrition. If the nutrition is good it will, and the operation will be a benefit to the patient not only as to the local distress, but also as to the general health. Garnett: The wounds in all the cases that have come under my observation have healed but one. Where the disease is far advanced and a cacoplastic condition of the fluids exist, one may reasonably expect the reparative process to be imperfect and difficult. Gross: A failure to heal depends first upon the low reparative power, and secondly upon the fact that the tissue lining the fistulous tract is tuberculous. Linthicum and Reamy: If retarded, I think first, because of the impaired vitality, but oftener from concussion of coughing. Mastin: I always try to allay the cough before operating. Andrews: Sometimes will not heal in consequence of tubercles about the rectum slowly ulcerating away. Ashurst: The wound is apt not to heal. Denison: The wounds will not heal readily. Kelsey: The sphincters should be interfered with as little as possible, as they are apt to be weak at the best. Allingham: The muscles should not be divided; they almost never want it. Andrews, Cook, Engelmann, Garnett, Gregory, Logan, Mastin, Sayre and Taylor, answer that they do not often fail to unite.

Question 5.—That the suppression of the discharge is positively beneficial? Is answered I do, or yes, by Brodie, Bontecou, Brinton, Solis-Cohen, Cole, Cook, Eastman, Houghton, Logan, Mathews, McGuire, Owen, Prewitt, Senn, Taylor, Varick, Whittaker, Wilson and Wight. Brodie, Varick and Wilson would operate on the general principle that they would close another drain on the constitution and thereby save strength. Reamy: I believe so. Roberts: Don't know that it has any effect. Sayre: I am positive of the fact. Wright: Indirectly, yes, by relieving the system of one source of irritation and exhaustion. Hamilton: The purulent discharges in these cases are often excessive and exhausting, and the continuance of the fistula provokes intestinal irritations causing tenesmus and diarrhoea. Peck: Yes, in favorable cases. Gregory: I suppose it advantageous. Mastin: Not beyond the local comfort of the patient. Linthicum: In advanced cases I think not. Borck: As far as comfort concerns. Allingham and Swafford: I cannot say this. Andrews: The discharge is usually too small to have a perceptible effect, but suppression of large discharges is beneficial. Battey: Doubtful. Garnett: The discharge, unless excessive or profuse, should in no case be arrested after the disease is fully established, unless precaution be taken beforehand of establish-

ing a seton or issue in the arm or some other eligible point, as a substitute for the conservative irritation exerted by the suppurating fistula. This plan I have invariably adopted. Blisters, setons and issues demonstrate in our daily practice this compensative sympathy which binds the intricate parts of the human system enabling each to coöperate, under certain conditions, in conserving the whole and maintaining its integrity. Hamilton: If there is any probability that the fistula has served a useful purpose as a derivative, it is much better to place an issue in the arm or in some other part of the body, rather than permit the continuance of the fistula. Linthicum: I would make an issue somewhere in the neighborhood of the diseased lung, keeping it open at least until the wound healed, in order to prevent a sudden termination from the fistula to the lung. Reamy: Modern views as to etiology and pathology of phthisis render the old views of benefit from counter irritation impossible. On the contrary, it can only exhaust strength, and hasten the fatal issue. Sayre: The suppression of the discharge will never increase the pulmonary trouble if you put an issue in the arm or some other part of the body, in cases in which it is necessary. Cook: When phthisis becomes worse after an operation, I believe it is not checking the discharge which causes it, but generally is an improper or careless treatment of the patient before, during, or after the operation. One who has phthisis is very sensitive to changes which others would not notice. It is strict attention to the details of treatment, both general and local, that brings success in these cases. Kelsey: Only once has it happened to me to see the cure of fistula followed by a marked increase of the lung trouble; and even in such a case the relation between the cause and effect cannot be established. Engelmann: I have seen it apparently increase the pulmonary trouble. Denison and Rochester: Have seen injurious and even fatal results follow the suppression of the discharge, but in the hands of others.

Question 6.—That the operation tends to retard or arrest the progress of the disease and to prolong the life of the patient? Battey, Bontecou, Brodie, Solis-Cohen, Cook, Eastman, Houghton, Kelsey, Linthicum, Mathews, McGuire, Moore, Owen, Prewitt, Reamy, Roberts, Sayre, Senn, Taylor, Varick, Wight and Wright answer, I do. Sayre: I am certain it does. Hamilton: It often does. Peck: Yes, in favorable cases. Moore: Have undoubtedly seen life prolonged by the operation. Wight: Retards as a rule. Mathews: I do, for the reason that if a good result is obtained, a great drainage is stopped, and also that nervous irritation ceases. Battey: Yes, as the patient is thereby enabled to take air and exercise. Agnew and Allingham: Retards if proper precautions are taken. Hamilton: It has happened to me in several instances to witness a marked improvement in the general condition of tuberculous patients when a cure of the fistula has been effected. Garnett: I do not believe that the operation exerts any influence in regard to arresting the disease, unless the discharge be excessive. In that event the arrest of it could negatively check the progress of the dis-

ease. Cole: It may retard but not arrest the disease. Reamy: Yes, I am of the opinion that any suppurating point, as a fistula in ano, may serve to drain away the vitality of the patient, as well as act as a nidus of distribution for the bacilli of tuberculosis. Senn: Yes, but not in all cases. Mastin: Indirectly, by removing a source of annoyance which lessens the powers of resistance by lowering the vital forces. McGuire: Tends to retard the progress of the disease, as prolonged suppuration provokes tubercular disease. Brinton and Sayre: I think it retards the disease, inasmuch as it improves the general health by removing one source of drain, and places the patient in a better condition to arrest the main disease, phthisis. Logan, Prewitt and Wilson: To the extent that it removes one cause of general debility. Whittaker: The fistula in this case falls among the local expressions of tuberculosis, every one of which should be treated and cured if possible. Gross: In confirmed cases of tuberculosis of the lungs the fistula rarely heals unless the entire tuberculous granulative tissue be thoroughly removed by the knife or spoon. Senn: I consider the local trouble tubercular in such cases, and would urge thorough removal of granulations with sharp spoon and actual cautery, and to always use Paquillin's cautery in place of the knife. In all cases except where the pulmonary disease is far advanced and the patient debilitated, I would operate, believing that operation adds to length of life and comfort of patient. McGuire: The organized matter lining the fistula should be cleanly cut away and the wound closed when it is practicable, with sutures, and union by the first intention obtained if possible. It can often be done. Gunn: The cure of the fistula is one of the means to be resorted to as an aid to such cure. If associated with proper means to combat the predisposition or disease, the cure of the fistula enhances the prospect of a cure of the consumptive patient. Owen: I regard it as a valuable preventative means. Richardson: Patients seem to improve after the closure. Roberts: Retards so far as it relieves the source of discomfort. Wright: Only in an indirect manner, viz: by relieving patients of one source of much distress or annoyance. Borck, Gregory, Swafford and Wilson: Cannot say. Bontecou: I do not think the operation has any influence on the pulmonary disease, except making the patient more comfortable. Whittaker: No effect upon it. Andrews: There is no substantial proof of it. Theoretically one would expect it to do so slightly. Engelmänn, Ingals, Mastin, Peck, Roberts, Senn, and Taylor: I think not; or no. Denison and Richardson: No; life is shortened.

The answers seem to indicate that phthisical patients are less predisposed to fistula than is commonly believed. With reference to rapidly advancing cases or in the advanced stages of phthisis the general opinion is, that interference is unwise and that the life of the patient is often actually shortened. This is expressly stated by Allingham, Ashhurst, Cole, Kelsey, Linthicum, Marcy, Mastin, Prewitt, Swafford, Varick, Wight, and others. Senn, while recognizing this, says he would operate if the local

trouble gave rise to much discomfort and suffering.

Under the head of general remarks Roberts says: I am inclined to think that the refusal to operate is founded upon unproven tradition. Marcy: I am very glad that you are seriously discussing the subject, since the great mass follow rules of dictation rather than independent reason. Brinton: I think that the surgeon should try and weigh probable ill and favorable results, and in proper cases give the patient the best chance. Sayre: My rule is to operate on all cases as soon as the trouble is discovered. The longer the operation is delayed the worse it will be for the patient. I would suggest to dry up all exhausting discharges, and remove all sources of constitutional irritation, so as to improve the general health in all phthisical patients.

Cook: As anal fistula is only a tubular ulcer, differing in no respect as to the discharge from it, and the effect of this on the system, from an ulcer on any superficial part with a like extent of surface, I cannot understand why it should be viewed with superstition. We do not find physicians refusing to attempt to heal any other drain or discharge from the body. Houghton: I regard all rectal trouble located on or near one of the sphincters as operating reflexly through the sympathetic system, in a most injurious and often in a varied manner similar to cervical and urethral reflex irritants. This seems to me sufficient reason for their removal. Denison: The fistula will heal or the discharge lessen in a cool, dry and elevated climate, such as is known to arrest pulmonary phthisis. Under proper treatment of the lung disease the fistula heals itself, as in two patients of my own.

General Summary.—Operative interference is advised and practiced with benefit to the patient excepting, 1st, where the cough is constant, unless this be first allayed; 2d, where the pulmonary disease is either rapidly advancing, or is far advanced; 3d, where the reparative powers of the patient are so low that they evidently are unequal to the task of healing the wound.

Although it is proper to operate during any season, preference should be given to pleasant weather, such as will allow the patient to be in the open air.

Where the tissue surrounding the fistulous tract is supposed to be tubercular, some advise its removal by the knife or sharp spoon.

The wounds heal in nearly every case in which an operation is justifiable. There should be as little interference with the sphincter muscles as possible.

The suppression of the discharge is thought to be positively beneficial.

It is recommended by some that where the discharge is supposed to have a beneficial derivative effect, that a seton be inserted in the arm or other eligible part, before operating on the fistula.

It is believed that a successful operation tends to retard the progress of the disease, and to prolong the life of the patient.

There are many cases in which this question presents itself as a subject of vital importance, and one upon which all the experience of the profession should be thrown, that the disputed points may be cleared

up and the method of treatment placed upon a clearly defined basis. I believe that the matter contained in this paper, and the conclusions deduced therefrom, may contribute to this end.

DR. JOHN B. JOHNSON, of St. Louis, in discussing the paper, said that he had in mind a number of cases where the tubercular process was hastened or aggravated by the cure of the fistula in ano, and that the tuberculosis was not a local disease, but affected the follicles of the mucous surface of the digestive tract. He considered operation not justifiable in advanced phthisis.

DR. J. McF. GASTON, of Atlanta, thought there was no doubt about the salutary effect of operative treatment.

SOME OF THE COMPLICATIONS OF STRANGULATED HERNIA.¹

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I will not presume on the intelligence of the members of this Association by unnecessarily occupying time in giving the history, anatomy, or even a description of this comparatively common operation, which is doubtless familiar to us all. There are few cities in America at this time, that have not one or more surgeons who can show a record of successful operations for strangulated hernia, and who are perfectly familiar with every step in this important operation. Hence I shall confine myself to a report of some of those complications which may arise in the path of any surgeon who seeks to relieve his patients of this dreaded malady by operative interference, as illustrated by a few cases that have come under my notice.

C. S., æt. 30, a vigorous, strong, muscular stonemason. I was called in consultation with a physician of one of our neighboring towns on April 16, 1885, and found that about nine years previous to this attack, a hydrocele had made its appearance on the right side, which had subsequently been tapped and temporarily relieved. About the time the hydrocele made its appearance the right testicle was observed to be enlarging; this continued for some time, until it became more than twice its natural size, and remained so from that time on. On examination, it was found to be hard and of a fibrous character, was not painful, was adherent to the surrounding structures, and was to a great extent immovable, either voluntarily or otherwise. On further examination, he was found to have a large hydrocele on the right side, and a strangulated complete inguinal hernia.

Neither the patient or the attending physician had any knowledge of the existence of a hernia prior to his present illness, nor, in fact, then, until he commenced stercoraceous vomiting some ten or twelve hours before. After a fruitless attempt at reducing the hernia, I tapped the hydrocele and drew off over a pint of water, after which the hernia was reduced

by taxis, dressed with a spica of the groin, and the patient was given an anodyne, and rest in the recumbent position enjoined.

Very much to our surprise, we were informed the next day that the patient was no better, but, on the contrary, was still vomiting fecal matter, and gradually getting worse, owing to which they desired me to come and see him. Being so engaged as to make such a visit impossible at the time, I requested my friend, Dr. J. Harvey Craig, to go in my place. He found the hernia down, returned it without much trouble, and dressed it as before.

On the third day the same message was repeated, and we were again requested to visit him. By this time the case had become unusually interesting, and, in company with Drs. J. W. and J. Harvey Craig, I again visited the patient and held a consultation with his attending physician, only to find the same apparent condition as had previously been existing. We again reduced the hernia, and advised the attending physician to be vigilant in keeping it reduced, by carefully watching the compress and bandages, in the belief that that would give him the desired relief. Such was not the case; for the vomiting did not abate in the least, and on the fourth day the same message was repeated as before. Accompanied by Drs. Craig, Sr. and Jr., I again visited the patient and found the hernia protruding as before, which, owing to his incessant vomiting and straining, made it almost impossible to keep reduced. After a careful examination, it was agreed that some concealed difficulty of the bowel existed, and that an operation to discover and relieve it was in order.

Dr. J. W. Craig being the senior surgeon, performed the operation. The incision was made along the line of the inguinal canal, from Poupart's ligament to the internal ring, and the parts carefully dissected up until the inguinal canal was exposed, but no strangulation was found. The finger could be easily passed into the abdominal cavity through the internal ring, but no constriction could be found; the opening was enlarged sufficiently to admit of a careful examination of the condition of the small intestines, which were found normal. On further examination, however, it was discovered that the ascending colon had been dragged down further than usual, until the lower end of the vermiform appendix had escaped through the opening of the femoral ring and become strangulated at a point where it passed Gimbernot's ligament. When released it was found to be swollen to the size of a man's thumb, and very much discolored; so much so as to raise the question as to the propriety of removing it. But the gradual return of its natural color soon settled that question, and it was replaced in the abdominal cavity, and the wound carefully cleansed and closed. The operation was conducted and the wound dressed under antiseptic principles. The wound healed rapidly, and the patient made a perfect recovery without a single bad symptom, and returned to his usual occupation feeling as well as ever, excepting as to the hydrocele and the enlarged testicle, the former having been tapped twice since the operation, the last time being since the preparation of this report had been begun.

¹ Read in the Section on Surgery at the Thirtieth Annual Meeting of the American Medical Association.