ON THE

DELETERIOUS RESULTS OF A NARROW PREPUCE

AND

PREPUTIAL ADHESIONS.

BY

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SUR LES RÉSULTATS DÉLÉTÈRES D'UN PRÉPUCE ÉTROIT ET DES ADHÉRENCES PREPUTIALES.

DIE SCHÄDlichen FOLGEN EINER ENGEN VORHÄUT UND DER PRÄPUTIALEN ADHÄSIONEN.

BY LEWIS A. SAYRE, M.D.

Professor of Orthopedic Surgery in Bellevue Hospital Medical College, New York.

In 1870 I published my first paper on this subject in the Transactions of the American Medical Association, under the title of "Partial Paralysis from Reflex Irritation Caused by Congenital Phimosis and Adherent Prepuce," illustrated by cases.

This paper produced a marked impression on the profession, and was extensively commented on by various medical journals both at home and abroad.

D. Campbell Black, M.D., F.R.C.S., Edinburgh, in his very valuable work "On the Functional Diseases of the Renal, Urinary and Reproductive Organs," published in 1872, quotes very extensively from this paper, and concludes by saying, on page 213: "I offer no apology for thus giving considerable prominence to the foregoing cases. I attach to them immense importance as disclosing, possibly, a frequent source of infantile paralysis, and the numerous indications of nervous irritability in childhood, while, as far as known to me, Dr. Sayre's cases are unique in medical literature."

I, therefore, feel that I can justly claim to have been the first to draw the attention of the profession to this important subject. *

In 1875 I published a more elaborate paper on the same subject in the Transactions of the American Medical Association for that year, entitled, "Spinal Anaemia, with Partial Paralysis and Want of Coordination, from Irritation of the Genital Organs."

This paper was also illustrated by a number of cases which had been relieved of

* I have recently been informed that Mr. Stanley published on this subject in the Medico-Chirurgical Transactions, Vol. xviii, p. 260, 1833. But on referring to his paper I find he reports some cases of reflex paralysis from abscess of kidney, which had been supposed to depend on disease of the vertebrae and spinal cord, but which were found healthy on post-mortem examination, and I find no case reported from congenital phimosis.
their paralysis, and various other nervous symptoms, including want of coördinating power, etc., by simply removing the constriction from the glans penis, and the retained and concrete smegma from behind the corona, and so arranging the prepuce that it could glide easily to and fro over the glans without any constriction, thus permitting the parts to be kept perfectly clean, and thereby removing one great source of irritation.

In this proper arrangement of the prepuce, it became necessary in some cases to perform circumcision, or an actual removal of a small portion of the prepuce, and in some cases to dissect it from its attachments to the glans, which were not simply by agglutination, which is the normal condition, but the attachments were by actual adhesion, an abnormal condition, and entirely different from the normal agglutination. Unless there is a great redundancy of the prepuce with constriction of the elongation there is no occasion to remove any of the tissue; but in the great majority of the cases the object to be obtained can be easily accomplished by simply passing a grooved director into the narrow orifice of the prepuce, gliding it between it and the glans, with the groove toward the prepuce, and pressing it with the thumb and finger as far back as possible, glide into the groove a pointed curved bistoury, and divide the contracted tissue sufficiently to enable you to tear it back and uncover the glans; then a slight nick with the scissors or bistoury, through the thickened fold of the edge of the frenum; after which you can, with the thumbs and forefingers of the two hands, easily tear down the frenum and other adhesions so as to expose the entire glans, and in the sulcus behind the corona will often be found a hardened smegma, sometimes containing chalky concretions, which have been one of the sources of the irritation, and which can be readily wiped away; the whole operation can thus be completed without the sacrifice of any tissue, and with very little loss of blood.

In some cases it may be advisable to take a stitch on either side of the incision, between the integument and mucous membrane; in others no stitching is required; but in either case the foreskin is carried well back, uncovering the glans, and a little styptic cotton, or a rag wet in persulphate of iron, is wound around the wound and left in situ for eight or ten days, when the wound will be entirely healed, and the organ in a normal condition, with the glans partially covered with its prepuce, but which can be easily uncovered, as it should be, and not mutilated and disfigured, as I have frequently seen it, by a too free removal of the prepuce, thus leaving the glans entirely unprotected.

While, therefore, I may be responsible for bringing this subject so prominently before the profession, I wish to raise my voice in protest against this unjustifiable mutilation, as well as against the indiscriminate performance of the operation in cases where it can be of no avail.

This unnecessary mutilation in some cases, and the unwise and injudicious promises of great relief in others, where it can do no good, is likely to bring the operation into disrepute, and thus deprive the cases that might be benefited by its performance of receiving that relief which in many cases it certainly will afford.

While some over-zealous advocates have recommended and performed the operation of circumcision in all cases of infantile paralysis, even those dependent on some central lesion of either the brain or spinal cord, where it can do no good, others have gone to the opposite extreme, and deny the existence of a paralysis, or even muscular incoordination from reflex genital irritation.

The object of this paper is to harmonize these two extremes, and show that there are some cases of very anomalous and extraordinary nervous manifestations entirely dependent upon some irritation of the genital organs, in which an operation is not only justifiable, but absolutely demanded, and that in many instances the relief from all the strange symptoms has not only been immediate, but permanent after the operation, without any other medical or surgical treatment.
While I am convinced that the observation just made is absolutely correct, I am also equally well convinced that any attempt to relieve a nervous disturbance by an operation on the genital organs, when the cause of that nervous difficulty was some organic change in the brain or spinal cord, would result in no benefit whatever, and in such cases an operation is unjustifiable and should be condemned.

I shall not in this paper refer to any of the numerous cases that have been under my own personal observation and treatment for the past 15 years, although they have been numerous and many of them exceedingly interesting, fully corroborating all the statements made in my two original papers, but I shall take only a few of the cases for illustration from the numerous reports that have been made to me by various physicians and surgeons in different parts of the country, thus showing that other competent observers have arrived at similar conclusions with myself, and have had the same satisfactory results in practice, when they have operated upon properly selected cases.

The first case is from the distinguished Professor of Surgery in Jefferson Medical College, and is a beautiful illustration of the rapid improvement that sometimes occurs:

1112 WALNUT St., PHILADELPHIA, February 7th, 1882.

DEAR SAYRE:—

The case to which Lewis* heard me allude in my clinic last December, was that of a child two years of age, whose gait simulated that of locomotor ataxia, being uncertain, precipitate, irregular and jerking. There was no paralysis of any muscles; but the trouble seemed to be due to defective coordinating power over the muscles. On the second day after removing a contracted and adherent prepuce, the trouble had entirely disappeared and I found my little patient running about the room. Yours truly,

S. W. GROSS.

The following case from Dr. A. R. Mott, Jr., Resident Physician of Randall's Island, is a good illustration of the injurious effects upon the nervous system by girdling or strangulation of the glans penis, and the immediate relief afforded by the removal of the same.

The results are the same upon the nervous system whether the partial strangulation is from an adherent and contracted prepuce, or from a string tied around the organ.

RANDALL'S ISLAND, JANUARY 18TH, 1880.

DEAR DOCTOR:—

I have been unable to find the report of the case of which I spoke to you on Friday, but know it was made in the Hospital Gazette of January, 1879.

The following, however, is an outline of the history, taken from the case book of the Workhouse Hospital on Blackwell's Island, of which I was at the time House Physician.

Very respectfully,

A. R. MOTT, JR., M.D.

TO LEWIS A. SAYRE.

Case.—Ine English, age forty-six, native of England, widower, clerk; admitted to Workhouse Hospital (B. L.) Dec. 23d, 1878. Patient had been at work for a week, as a prisoner. On the 23d was noticed to be restless and uneasy, and finally, in the evening, he fell from his bunk in a fit. During the next forty-eight hours he had several (eight or nine) convulsions, and during the intervals lay in a semi-comatose condition, showing no consciousness except to stir a limb when pinched. Pulse 120, temperature 101½⁰, respiration 18—swallowed nothing and passed fæces in bed. Continued in this condition to evening of December 25th (temperature having fallen to 100), when a string was discovered passed twice around the penis behind the corona and tied, the long prepuce serving to conceal it from observation. While not sufficiently tight to occlude the urethral canal, still a firm indurated band remained after the string was cut, and did not disappear for four or five days.

* My son, who had been present at his lecture.
Within one hour after the removal of the string the man sat up and asked for milk, and from this time remained perfectly well (was under observation for three months). He declared that he remembered nothing that had taken place during the past three days—had never had “fits,” denied venereal, was moderately addicted to drink, but had led a “virtuous life since the death of his wife, two years before.” Though seemingly healthy, there was nothing to indicate incorruptible virtue or veracity.

The following case from Dr. James S. Green, a very distinguished physician of Elizabeth, N. J., is exceedingly interesting as showing how rapidly in some instances cases of almost complete paralysis are at once restored to nearly full muscular power.

342 Union Avenue, Elizabeth, New Jersey.

MY DEAR DOCTOR:—Of a number of cases of reflex paralysis upon which I have operated and performed circumcision, I desire to send you the account of one demonstrating remarkably the rapid curative effect of the operation. Some time in April last a boy, fourteen years of age, was brought to me, supposed by his friends to be suffering from chorea. There was intense hyperesthesia of the skin of the whole body, very marked want of coördination of motion in the arms and hands and great difficulty in walking.

The youth was so uncertain in his gait and had fallen so frequently, that he was afraid to attempt the act alone. He had been suffering in this way for three years, becoming gradually worse, and was mentally below the average of boys of his age. Having taken medicine in large quantity and sugar of milk adulterated infinitesimally for a long while, his attendants were surprised, after I examined his penis, with my opinion that circumcision would cure him. The operation was performed that afternoon; the next morning the boy was relieved of his hyperesthesia, and in forty-eight hours he recovered entirely the use of his limbs.

He is now at school, which he had not been able to attend in three years, and was so altered in appearance when I met him on the street last week that I scarcely knew him. I have the notes of a number of other similar cases, less striking in their features and rapidity of cure, but all demonstrating the correctness of the views you hold of the pathology of the disease.

Very truly yours,

James S. Green.

The next case is one of paralysis, and reported to me by Dr. Wirthington, of Livermore, Pa.

PARALYSIS FROM PHIMOSIS.

Livermore, Pa., Dec. 19th, 1881.

Dr. Lewis Sayre:—I have often thought of giving you the history of a case of paralysis from congenital phimosis, being a parallel to your “Pee-Pee Case” (page 14).* After reaching the house I found a beautiful boy (except he looked pale and worn out) of whom it was said he never was sick.

He was three years old and had been paralyzed in his lower extremities for six months previous to my seeing him. The doctor who had attended him had used all the ordinary drugs given in such cases, and in full accord with his diagnosis. Meeting the father of the boy one day, he asked me for an opinion as to the cure of the child. Of course he had stated the fact of his boy being paralyzed. Not feeling at liberty to venture an opinion, I was asked to see him. The “Pee-Pee Case” made it an easy matter to diagnosticate, and I told the father, accordingly, that his child could be cured, and that he would require no medicine. After the parents and grandmother had held their consultation, I was called to take the case. The next day, October 1st, 1878, I operated on the boy, after first putting him fully under the influence of ether.

The prepuce was adherent almost all the way around the glans penis. Behind the corona was a solid cake of sebaceous matter. I never gave a single drop of medicine, and the case made a happy and rapid recovery. Before the sore was completely well, all symptoms of paralysis had disappeared.

I am respectfully yours,

F. J. Wirthington, M.D.

* Referring to case reported in my Lectures on Orthopaedic Surgery.
As I was anxious to know the ultimate result in this case, I wrote to the Doctor in about two months, and received the following reply:

Dr. L. A. Sayre:—

Dear Sir:—I have given you the history of that child so far as I know, except one fact; the father tells me to-day that when the child was born he was considered the biggest and finest boy that had been born in the community for a long time. At the age of about two years he began to be contrary, fretful and peevish, etc., and would fall down without the slightest cause. This state of things went on for some time, until an M. D. was called in, who told them their child was paralyzed, and treated him with the usual nerve tonics and with electricity. Notwithstanding all this, the boy went steadily down, and the paralysis continued until I saw him, October 1st, 1878, when he was unable to walk. He was pale, lean and anemic. The doctor who had examined him could find nothing which he thought caused the paralysis. I operated on this boy October 1st, 1877, and before the wound that I had made was healed, my little paralyzed patient could walk. He can walk, and has run and jumped ever since. He is hearty, and is the very picture of health.

I believe he began to improve as soon as he was operated upon, from the fact of his having passed his water in a round, full stream, a thing he had not done for months. It dribbled away, while he cried all the time.

He never took a particle of medicine, and has not to this day, February 24th, 1882. He is well, and has never had a sign of paralysis since.

Very respectfully yours,

F. J. Wirthington.

The following case from Dr. Leech of Indiana, is interesting as illustrating the various nervous disturbances that can be caused by genital irritation, and the immediate relief afforded by a proper operation.

Leech's Case of Phimosis.

Dear Doctor:—

I send you the following report of a case, as you requested the members of the American Medical Association to do:—

Mr. John Maguire and wife, of our town, have but one child, a boy of fourteen months, who has been the terror of all that part of town for six months, as he cried constantly, except when asleep or nursed by his mother. He would lay perfectly still and squall, not showing any disposition to sit up, nor did he like to be raised up. He was very nervous, and would have times when his limbs would be rigid. This state of things grew worse until Wednesday last, August 23th, when the family physician was called in, and found the child with fever and suffering from great nervous excitement. He pronounced it a case of remittent fever, and gave medicine accordingly, but to no purpose, as the fever and excitement increased, and the child had spasms frequently, and particularly when his bladder needed emptying. At that time the child would strain and cry, giving evidence of great suffering, and had a tendency to prolaphe of rectum. It would have several spasms at these times, which would come on rapidly, and they grew more severe at each succeeding time. Late Saturday night, August 28th, in the absence of the family physician, I saw the child, and found paralysis of the lower half of the body, not very marked, but sufficiently to be easily diagnosticated, and spinal irritation. I at once examined the penis, hoping to find a case of phimosis, and, sure enough, I did. I had the family physician called as soon as possible, and before leaving the house that night I introduced a small groove director into the prepuce and laid it open with a bistoury. This exposed the glans penis enclosed in a sheath of mucous membrane, the latter agglutinated to the gland so tightly that I had to use a sharp instrument to get under it, and even after I got a place started, I could hardly separate the two. I persevered, and finally exposed behind the corona glandis a roll of sebaceous matter, of a cheesy consistence and about the size of a cotton shoe string, and extending almost around the penis. I removed this, and after making a free incision of the deep mucous mem-

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brane, I washed away the remaining débris and applied water dressings, and left the child in a few minutes almost asleep, not nearly so nervous, and seemingly in a condition of general well feeling. I used no internal remedies, and now, three days later, the child has made marked improvement, and bids fair to make a rapid and complete recovery. The glans, while in the grasp of the mucous membrane, was about one-third its natural size, and I think the contracted scar tissue, the result of inflammation, was the cause of the whole trouble.

If you desire, will report the progress of the case.

Very truly yours,

DR. L. A. SAYRE.

Attica, Fountain Co., Ind., December 1st, 1875.

Dear Doctor:—

The boy I wrote you about in August last has remained perfectly well ever since the operation. Has had no spasms or other nervous disturbance, and runs and jumps as active as any boy of his age.

Very truly yours,

T. F. LEECH, M.D.

The following interesting case of phimosis, with reflex effects, chorea, etc, is from J. H. Pooley, M.D., Columbus, Ohio, Professor of Surgery, who writes:—

Some years ago I was consulted with regard to a child about a year old, who presented some curious nervous symptoms. He was a large, finely developed boy, and until three months or so before my seeing him had always been in perfect health.

His condition was one of localized chorea, manifesting itself in constant convulsive movements of the head. They were nodding, or antero-posterior movements, alternating with lateral or shaking and twisting motions. By the time I saw the patient these convulsive movements had become almost constant during his waking hours; there was no grimace or distortion of the features, no choreic movements of the extremities; indeed, the whole affection consisted in the nodding and shaking movements of the head referred to. These were almost incessant, sometimes slow and almost rhythmical, then for a minute or two rapid and irregular, seeming to fatigue the little fellow, and accompanied by a fretful, whimpering cry.

The child had been subjected to a variety of treatment, but without any benefit or effect of any kind. Upon the most careful examination of the patient and his history and antecedents, I

* I wrote to Dr. Leech in July, when I was preparing this paper, to learn the present condition of his patient; but he did not receive my letter in time, and has just sent me the following letter, which seems of so much importance that I add it as a footnote.

MY DEAR DOCTOR:—

Your letter of July 14th last is just at hand, having lain in the Attica, Ind. P. O. all this time. The case of phimosis you refer to was an interesting one, and the operation was a grand success. The boy is now almost a man, and helping his father in the express office; and his father took great pride in telling me last summer, when I was in Attica, what a noble fellow he was, and how he owed his life to me, etc.

The profession is under lasting obligations to you for originating this proceeding and bringing it before the world so prominently. I know you must often feel disgusted and amused to find how slow some surgeons are in finding it out. My experience with the operation would make a book worth reading. In the first place, I used to treat those cases as paralysis from den- tition, as Prof. Gross taught me, and I would apply the actual cautery to the lumbar region, etc. One case, Franklin Robinson, a banker's son in Clinton, Mo., had a balanitis come on, and I liberated his glans penis, wiped out the smegma, and cured my case of paralysis without knowing why or how.

This was in 1868, and your paper read at the Association in 1870 was a "light from heaven" to me; in fact, I saw a great light; and since then, the case you refer to is only one of many.

Yours truly,

JUDSON, PARK CO., INDIANA.

T. F. LEECH, M.D.
could not discover anything that seemed to throw any light upon the case, except a condition of well-marked phimosis. Acting upon this, I immediately circumcised him, and from the very day of the operation the spasmodic action began to diminish, and in two weeks he was entirely well, without any other treatment of any kind. There has been no return.

This case was published in the Toledo Medical and Surgical Journal, January, 1883, and copied in Braithwaite's Quarterly Epitome of Medicine and Surgery, Part XIII, March, 1883.

Some years since, Dr. W. R. McMahon, of Huntington, Indiana, reported to me two cases of epilepsy caused by congenital phimosis, and that he had entirely relieved by operation. As I was anxious to know whether the disease had returned, I wrote him again a few months ago, and received the following reply:—

**Prof. L. A. Sayre, New York:**

*Dear Sir:*—In answer to your letter concerning the cases of epilepsy caused by genital irritation, and which I relieved by operation on the penis, and of which I sent you a full account some years ago, I will say, that they never had an epileptic seizure since the adhesions were broken up. They are now young men of sixteen or seventeen years, and in good health.

I have seen one other case of congenital epilepsy in a boy of ten years, in which there was very firm preputial adhesions and a high grade of inflammation of the parts. I separated the adhesions (gave no medicine) six months ago, since which time he has not had a single convulsion.

Yours very respectfully,

**Huntington, Indiana, July 22d, 1887.**

**Dr. W. R. McMahon.**

The following very instructive case of convulsions and paralysis from phimosis was operated upon with perfect success by Dr. I. D. Griffith, Kansas City, Mo.:—

**CONVULSIONS AND PARALYSIS FROM PHIMOSIS CURED BY CIRCUMCISION.**

**Case.**—In 1883 I received a letter from a very intelligent gentleman of Missouri, from which I make the following extract:—

Our little boy is now two years and eight months old; is a very large and fully developed child, with large head, but well formed; general health good; he is fat and full of life. About the middle of June, 1882, one night, when he was put to bed, we noticed he had a high fever, which we thought was the result of a couple of insect bites on each foot, which caused the feet and legs to be considerably inflamed. About 11 o'clock he was taken with a very hard convulsion, which lasted for thirty minutes or more; we sent for our physician, and he thought the convulsion was caused by a high state of nervous excitement (his nervous system being very highly developed); for four or five days the convulsions continued at intervals, having from three to six a day, after which he seemed perfectly well, until December 2d, 1882, when again, after a high fever, convulsions followed, but only had two, and was perfectly well again until February, 1883, when he was again taken with convulsions, which continued for a week or more, at longer or shorter intervals. During this spell we had several physicians to see him, but could make no satisfactory diagnosis. They all thought he had too much brain, and it might be the result of some nervous derangement. All trouble, however, again passed off, and he was seemingly perfectly well during the daytime (and right here I will say that he has always been exceedingly restless at night), until in August, when he was again taken with convulsions (this time he had no preceding fever), which continued for several days. Our physician said the convulsions were the result of malarial poison, and put him on heroic doses of quinine, giving five-grain doses every three hours for a week. During this spell a new symptom manifested itself, viz.: paralysis of the hips and legs, rendering him unable to walk at all. The convulsions continued to come on at shorter and shorter intervals. Now, Doctor, I will, as nearly as I am able, describe the spasm: They have been variable, but mainly a jerking of the muscles; sometimes the face has gotten dark; he has never foamed at the mouth; breathing labored, pupil of the eye dilated,
though the eye was fixed, and usually the spasm would pass off with a cry, as if in pain, but often would pass off without any stupor, though sometimes he has gone to sleep just after a spasm. He sometimes would fall backward, and often fall over on his face. Spasms have not been preceded by a shriek, as a rule, though sometimes he has cried out just as a spasm came on. He does not bite his tongue, as a rule, though he did it once. Can anything be done to relieve this terrible cloud hanging like a pall over us?

Let us hear immediately, and, if necessary, will bring him to you as soon as possible.

With much respect, I am, in suspense, most truly yours,

Geo. W. Halloway.

I immediately wrote to Mr. Halloway, requesting him to ask his physician to carefully examine the child's genitals, and if he found phimosis, to circumcise him at once.

I received a letter from the father a few months after, stating that Dr. Griffith, of Kansas City, had circumcised his boy, with the most satisfactory results. He had entirely recovered from his paralysis, and had had only one convulsion since the operation, which the father thought was caused by indigestion. As I was anxious to know the permanency of the cure, I wrote to Mr. Halloway a few weeks since, and in response received the following letter from Dr. L. D. Griffith, of Kansas City:

KANSAS CITY, Mo., July 29th, 1887.

Dr. L. A. Sayre:

Dear Doctor.—Mr. Halloway was in to see me, and asked that I should write to you something of the history of his little boy from the time of the operation for phimosis. He, at the time I saw him first, was, I think, the most intensely nervous and restless young one I ever saw.

The least noise was most distressingly startling to him, almost causing convulsions; these last had become so frequent that his facial expression had become noticeably changed, and his mother seemed to be distressed whenever she looked at him. The day I operated (to give you an idea of the frequency) he had fifteen, and this was not unusual at all, as, whenever the least drop of urine would attempt to pass, priapism would immediately set up and a convulsion follow. From the moment of the operation (and, by the way, the foreskin was adherent all around, and a large roll of casing matter just back of the corona) his convulsion ceased and he has had none since, with the exception of one, and this from eating half of a watermelon, or something which overloaded his stomach. Now, his expression has changed and with it his entire disposition. He recovered from his paralysis almost immediately after the operation.

I was called, not long since, to a neighboring town to see a little one with hip-joint disease, and with the opening up of the foreskin and dissecting it from the head of the penis, I removed the extension from the limb and the joint disease (?) disappeared. Beside these, I have seen ten other children suffering from convulsions relieved after I operated.

Yours truly,

J. D. Griffith.

The following letter explains itself:—

MOBILE, ALA., 106 St. Francis St., May 29th, 1887.

Prof. Louis A. Sayre, M.D., 285 Fifth Avenue, New York:—

Dear Doctor.—Having read with much interest some articles of yours on reflex irritation, and one article on "Spinal Anaemia, with Partial Paralysis and Want of Coordination, from Irritation of the Genital Organs," permit me to thank you for this valuable contribution to our profession, and to ask your views as to my diagnosis and my proposed treatment of a case met with to-day in my practice.

W. E.—a, male, white, aged six years, parentage good; very sallow, with black eyes and dark hair; head large, good intellect; teeth decayed; lower extremities atrophied; feet inverted, the right more than left; too much bending of knees backward when standing; the feet can be easily abducted to normal position, and if done with child standing, will remain by weight of body; can only walk short distance without falling; when walking, the feet are turned inward, the knees project forward and inward so as nearly to touch, with legs divergent; the gait unsteady.
and inability to move in a straight line. Penis very small, not larger than a child six months old, prepuce long, with orifice so small as scarcely to admit a silver probe of pocket case, and preternatural redness of same. Frequent priapism, which has been observed since one year old; only partial control of sphincter ani; in other words, is not able to resist evacuation of rectum for a minute when nature calls. This the mother has noticed "ever since child commenced sitting up." The height of child is three feet four inches. In catechising the mother, she says: At birth the child was large and well-developed; when about nine or ten months old a weakness of neck was noticed, and he was not able to sit alone until eleven months old; after he learned to crawl, he continued to do so until three years old, when he was first able to stand alone; was four years old before he walked any. The atrophy of lower limbs first attracted attention in his efforts to walk. Appetite "not very good," very few things agree with him. Is this a case of "spinal anaemia with partial paralysis and want of coördination, from irritation of penis?" Such is my diagnosis. The treatment proposed—circumcision, nutritious diet, electricity, strychnia, cod-liver oil, friction, phosphorus, and, in short, assist nature to build up; an instrument to keep limbs in place while walking. Now, my dear Doctor, you have my case; I would send him to you, but the parents are not pecuniarily able to visit New York, and hence my letter to you for any suggestions you may favor me with. I have had very little experience in mechanical appliances, and you will do me a favor by specifying particularly on this subject.

I am very respectfully yours,

A. J. Reese, M.D.

I immediately wrote to the Doctor, stating that I thought his diagnosis correct, and advised him to circumcise the child at once.

As I was anxious to know the ultimate result of the case, I again wrote to the Doctor in June, 1887, and received the following reply:

M'obile, Ala., July 28th, 1887.

Prop. Louis A. Sayre:—

Dear Doctor:—Your letter of inquiry regarding a case about which I wrote you, May 29th, 1887, has been received, and should have been answered more promptly, but unavoidable circumstances prevented.

The case of which you speak, if I remember correctly (for I had the misfortune to lose my notes of about fifteen cases) was a boy, six years old. I operated, with remarkable results; digestion improved rapidly, perfect control of sphincter muscle, coördination all right. Saw him not long since, in fine health; a little parrot toed, otherwise all right. I am glad, my dear Doctor, to have the opportunity to thank you for your valuable contributions to the healing art. Since the above-mentioned case I have operated about 25 times for this class of troubles, and never with regret; five cases within last few months, t. e. 1st. Pat. McM., aged two years and six months; one of twins; blonde, with large brain; unable to walk; the lower extremities not developed as body and upper extremities. The mother said she thought he had gravel, as he complained whenever he made water, as if in pain, and was very nervous. I examined genitals; found adherent prepuce, except the portion immediately surrounding meatus. Circumcised; removed hardened smegma (which was very abundant); dressed with oil. This constituted treatment. The child was soon walking; the limbs developed rapidly; no more gravel. 2d. Circumcision in one case, of infantile paralysis, the first and only case I have ever seen. There was adherent prepuce in this case. The mother insisted that I should avoid circumcision if possible. Broke up adhesion, removed smegma, and with oil and forceps dilated prepuce. Child improved but was not entirely cured. I circumcised and had no further trouble. 3d. Was called to child eight months old (by attending physician) of good parentage, whose case simulated hip disease of right side; any motion of the limb gave great pain. My medical friend, having exhausted his resources and the child growing worse, sent for me; on examination found adherent prepuce, small preputial orifice; priapism when penis was handled (which we generally find in these cases); the movement of limb producing considerable excitement and pain. Diagnosed genito-reflex trouble; operated at once; result, "hip disease cured. Never has had any more trouble. 4th. A mulatto child, two months old; healthy parents; was brought to office for prescription. The legs permanently drawn up; great pain whenever an attempt to forcibly extend them; had been in this con-
dation, the parents said, several weeks. No fever; nursed well; otherwise well, so far as could be seen. Examined penis; found prepuce adhered and opening small; priapism as soon as handled. Circumcised and uncovered gland after Sayre's method; child got well without further medication. 5th. Was consulted five weeks since with regard to ten-year old boy, of good parentage, who invariably wetted the bed at night. Examined penis and found firmly adhered prepuce; gave chloroform; circumcised; removed smegma. Is now entirely well, growing rapidly; has never wetted the bed since. Mother says he is quite another boy.

Now, my dear Doctor, I have written so hurriedly and imperfectly, that I fear you will not be able to make anything out of my brief notes. Some of my cases are exceedingly interesting, and results surprising to all parties concerned. I regret not being able to give a more minute detail. Again thanking you for getting me out of some ugly scrapes, and for the good done mankind, I am

Yours truly,

A. J. Reese.

Office of Drs. Cross and Easley, Little Rock Ark., April 11th, 1876.

Dr. Louis A. Sayre, New York:—

Doctor,—Your paper in 1870, and report on the subject last spring in Louisville, have attracted my attention to your theory of "reflex irritation from congenital phimosis," and I have done circumcision as advised in several instances, and always with the happiest results. I suppose the subject is still of interest to you, and even at this late day venture to send you the last of my cases.

In February last, Mrs. H. L., wife of a prominent citizen of this place, called me to see her little son, three years old. The child was of fair size and development, though very pale. He walked in a difficult, sprawling manner, and had habitually a dazed, wandering look, although when his attention was concentrated he was not wanting in intelligence. His mother said that he had suffered from trouble in the genital parts since he was six months old, that she had called their attention to it, but that none of her medical attendants had advised an operation. She described his condition as one of almost constant suffering. His rest at night was much disturbed, and he would often scream and start from his sleep. In urinating he appeared to suffer great pain, the water often coming gutterm. At such times the child would writhe and move about half bent, the tears frequently starting from his eyes. The prepuce was found elongated and very sensitive. The contraction corresponding to the meatus was so tight that an ordinary pocket probe would barely pass. The nature of the trouble was explained and consent to an operation immediately obtained. The prepuce was retrenched, the mucous membrane snipped, and found at all points closely attached to the glans. So firm were the adhesions that the membrane was literally dissected back. Hardened lumps of secretion were found almost encircling the corona. But little inconvenience resulted from the measure and the child began at once to improve. He is now vastly better in every respect, indeed, is one of the brightest and most promising little fellows of my acquaintance. I send this, not because of any connection of mine with the little procedure, but that I may say how largely we are indebted to you for putting us right on this interesting and important subject.

Very truly yours,

E. T. Easley.

When apprised that I was writing to you, my friend, Dr. Dibrell, gave me the following memoranda, and the case is so graphic an illustration of the trouble in question that I think I need not apologize for sending it.

In November, 1875, was called by Mr. O, to see his child, eighteen months old. The little patient presented a wasted, emaciated appearance, with its legs and feet oedematous. The child had great difficulty in voiding its urine, and invariably cried when doing so. He could not walk, nor could he stand, unsupported, upon his feet; his legs, to use the expression of the family, "would fly from under him." These symptoms were progressively growing worse. An examination of the genitals showed an extremely elongated prepuce with congenital phimosis. Through the opening in the prepuce a No. 1 flexible catheter could with much difficulty be passed. This condition was to me a satisfactory solution of the whole difficulty, and I at once circumcised the child. Its restoration to health was very rapid, and without the aid of any therapeutic measures whatever.
I have recently written to Dr. Easley to know the present condition of the patient, but up to the present time have received no reply.

I could add many more cases from various physicians, similar to those here quoted; but it would only be corroborative evidence and add undue length to my report, and I will therefore only quote one more letter, just received from a total stranger, since I finished writing my paper, as it is instructive in showing that when the operation is performed, it should always be done properly. I therefore add it to my report:

Dr. L. A. Sayre:—

Dear Sir:—I have just read in the Medical Record that you are to read a paper before the International Medical Congress, next Monday, on the deleterious results, in children, of a narrow prepuce and preputial adhesion, which brings to mind a case I treated about fifteen months ago, a brief account of which I will now give you. In the early part of June, 1886, I was at Kingwood, W. Va., to see a case of talipes upon which I had operated a year previously, and was asked to see a boy eight years old, living in the country, three miles from Kingwood. The boy had always been unable to walk without support; rubbed the knees together until the skin was thickened and quite horny; the adductor muscles were hard and rigid, so that when the child was placed upon his back upon the table the knees could not be separated more than four inches; patient was well developed; no atrophy of any of the muscles.

He had been treated for “weak knees” by an intelligent physician, who had him wear some kind of a splint for several months.

As soon as I saw the case I was reminded of a case I saw in your Clinic at Bellevue, in the fall of 1885, it being a case sent to you from Cumberland, by Dr. “Tom” Healey.

I therefore examined its prepuce, and found it very much elongated and contracted, upon which I diagnosed it as a case of phimosis, producing reflex symptoms, and recommended circumcision, to which its parents readily consented. The operation was done without any anæsthetic with no one to assist me but the father. One week later I heard from the boy, through his father, stating that he was very much improved in his locomotion, being able to walk to the gate, about one hundred yards from the house, without assistance. However, about two weeks later on he wrote me saying the prepuce was contracting again, and that he had been trying to keep it open with a Holmes knife, but could not dilate it sufficiently, and that the boy was not walking so well as before. This result, as you will know, was because I had not removed enough of the prepuce, but the improvement immediately following the operation and then, too, the relapse simultaneous with the secondary contraction, convinced me of the correctness of my diagnosis. I therefore telegraphed them to meet me at Tunnelton, about one hundred miles west of this place, it being their nearest post on the B. and O., when I recircumcised him, whereupon he began to improve, and now walks quite well.

I write this to you because I am indebted to you for my ability to appreciate and properly diagnose and treat the case. Very respectfully,

C. C. Jacobs, M. D.
Class of '86, Bellevue Hospital Medical College.

APPENDIX.

Since presenting this paper to the Congress, I have seen a most valuable article by Dr. G. L. Magruder, of Washington, D. C., describing twenty-five cases of various nervous disturbances which he had entirely relieved by circumcision or dilatation, without any medication whatever. In this paper he also gives a summary of the nervous supply of the parts, and reviews, in so thorough a manner, a variety of the abnormal phenomena which accompany various peripheral nervous irritations, that I have thought it worthy to be added as an appendix:

"The nervous supply to the genital organs is derived from the pudic nerve of the cerebro-spinal system and the pelvic plexus of the sympathetic system. The pudic nerve is a large branch of the sacral plexus, and gives off in its course the inferior hemorrhoidal
nerve which supplies the external sphincter, integument around the anus, and terminates in the perineal and the dorsal nerve of the penis. The perineal nerve is distributed by the cutaneous and muscular branches to the integument in front of the anus, the sphincter ani, the scrotum, and under part of the penis, the levator ani, transversus perinei, accelerator urinae, erector penis, and compressor urethrae. The dorsal nerve of the penis accompanies the dorsal artery of the penis, and is distributed to the glans, prepuce, the upper surface and sides of the organ, and sends off branches to communicate with the sympathetic.

"In the female, the pudic nerve terminates in the clitoris, labia majora, and perineum. The other branches of the sacral plexus are the muscular, the superior gluteal, and the great and small sciatic. These supply the integument of the perineum and the back part of the thigh and the whole of the leg, the pyriformis, obturator internus, the two gemelli, the quadratus femoris, the glutei, the tensor vaginae femoris and the adductor magnus muscles. Branches from this plexus supply the hip joint, perforating the capsule, and also the knee joint. Connection with the sympathetic nerve is had immediately through the large cavernous nerve, which, after joining with the dorsal branch of the pudic nerve passes forward to supply the corpus cavernosum and spongiosum. This larger cavernous nerve is derived from the inferior hypogastric or pelvic plexus. This plexus distributes branches to all the pelvic viscera, viz., rectum, bladder, and the vagina in the female. Filaments pass to the vas deferens, vesicula seminales and prostate gland in the male. The connection with the rest of the cerebro-spinal and sympathetic systems is intimate.

"Reflex spasm and paralysis from diseases of the digestive canal, the ovaries, uterus and urinary organs have been frequently observed. Why cannot the same phenomena arise from genital irritations?"

"Reflex paralyses are due, according to Romberg, Stanley, and Graves, to a suspension of the sensory influence of the fibres of the sympathetic system, and are motor spinal paralyses. Brown-Séquard attributes the origin to chronic irritation of the genito-urinary organs with secondary contraction of the vessels of the cord and atrophy of the corresponding parts. Levisson experimented by compressing the uterus, kidneys, intestine, or bladder of rabbits, and found reflex excitability abolished and a paralysis of the posterior limbs lasting until the irritation was removed. The paralysis was considered due to excessive irritation of the sensory fibres, thereby causing an arrest of the function of the motor-nerve centres.

"Feinberg has observed in animals, after a coat of varnish, tremor, hyperesthesia, partial anæsthesia, increased reflex action, spasm and paralysis. Examination disclosed a dilatation of the cutaneous vessels, of the capillaries of the lung and the ramifications of the vena portæ, hyperæmia of the meninges and a dusky redness of the cervical cord. If the animals survive a certain length of time, proliferation of the neuroglia occurs with atrophy of the nerve tubes from compression. Rosenthal, quoting these observations, says: "Thus, the irritation of the cutaneous nerves produces a reflex paralysis of the centres of vascular innervation in the cord." Now, if this follows from irritation of the cutaneous nerves, can we not expect as much from irritation of the nerves about the head of the penis? The same author mentions the fact that several cases had been referred to him by Prof. Dittel, which, upon exploration of the bladder had given negative results, while a careful examination of motion and sensation showed a diminution of the various forms of sensibility in the legs; in the trunk there was abnormal excitability of the nerve trunks or of the genital organs. He cites the case of a girl, aged twenty-three years, who was relieved of a paresis of three weeks' standing, by the removal of a needle deeply imbedded in the vagina.

"Leyden reported three cases of paraplegia following diseases of the bladder, which
commenced by symptoms of motor and sensory irritation. He found diffuse softening of the cord in two cases. He thinks that a sacro-lumbar neuritis may be propagated to the cord in diseases of the bladder.

"Charcot, speaking of urinary paraplegia, says: 'The very number of the cases in which we see paraplegia appear in the course of disease of the urinary passages is, of itself, enough to show that the phenomenon is no chance coincidence.'

"From the foregoing I think that we are justified in the conclusion that phimosis and adherent prepuce give rise to varied troubles of more or less gravity, manifesting themselves either in the muscular, osseous or nervous systems; and that the removal of these abnormal conditions of the penis frequently affords marked relief, and at times perfect and permanent cure."

**DISCUSSION.**

Dr. De Forest Willard, of Philadelphia, remarked:—The former enthusiastic advocacy of circumcision by Dr. Sayre has led many rash and unthinking physicians to advise this operation in cases where it is entirely unnecessary, and has also caused them to overlook serious central lesions in cases where an adherent prepuce has been but an accidental coexisting condition.

In this, as in every other complaint, too much attention cannot be given to diagnosis and to the proper selection of cases. It is highly important to discriminate first between instances of simple adhesion and those in which actual contraction exists, since the former only require the slight operation of stripping of the glans, while for the relief of the latter, dilatation, incision or circumcision may be needed.

Stripping can be accomplished in nearly all cases of adhesion under one or two years old. It is performed by manipulating the penis for a moment until slight rigidity occurs, when gentle backward pressure soon reveals an orifice, pinhole at first, but soon enlarging until the meatus is revealed. Immediately around this opening, or at some point on the glans, adhesions will usually be encountered, but they can be broken up by the thumbs of the operator as he peels off the prepuce from the glans. Rarely a probe is required. As soon as the sulcus behind the corona is fully reached, the smegma is thoroughly cleaned away and a dressing of cosmoline upon borated cotton is applied. This should be speedily adjusted, as delay sometimes produces a condition of paraphimosis, for the relief of which dilatation or incision occasionally becomes necessary. Usually, however, two or three probes, or the rounded end of a couple of hair pins, slipped beneath the foreskin serve to permit the easy replacement of the hood. The dressing need not be disturbed until the slight inflammatory symptoms have passed, after which daily retraction and washing should be practiced throughout life.

I look upon subsequent cleanliness of this region as the greatest safeguard, not only against reflex irritations, but also against masturbation. Retained filth and smegma are far more likely to call a boy’s attention to his penis by their unrecognized irritative effects than washing can possibly do.

In the Philadelphia Medical Times, June, 1883, I urged the non-mutilatory operation of stripping in all cases where it was capable of giving an easily-moving prepuce, but insisted that no tight hood should be left, and that all reaccumulations should be prevented.

The observation of many hundred cases since that time has confirmed the opinions then expressed, and I now very rarely circumcise a young child. A recent writer states that he seldom performs the operation after eight years of age. My practice
is exactly the contrary; young children can be relieved by the simpler methods, but when a child has reached eight or ten, and has never been able to expose the glans, contraction is almost certain to be present, and circumcision must be performed. In adults there is rarely any escape when the prepuce is tight. To take advantage of the helplessness of young children is akin to the action of the "normal ovariotomist," who persuades feeble woman to undergo an operation the analogue of which he would not dare to propose to a man.

My rule is to secure a freely-moving prepuce in all cases where severe nervous symptoms arise, when there is muscular incoordination or paralysis, partial or complete, and in all cases where evidences of malnutrition are present. If the simple methods described will not accomplish this result, free dilatation, free incision, or, more frequently, circumcision, becomes essential. I am an advocate of discriminate circumcision, but not of indiscriminate. In properly selected cases it is of the greatest value, and yields most brilliant results. In all necessary conditions, as above indicated, I do not hesitate to perform it, but it is a comfort to know that in very many cases it is wholly unnecessary, and that the same results can be obtained by the more simple plan.

Circumcision is in itself mutilatory, but, like amputation, may become a necessity. I do not believe that the removal of the prepuce is hygienic. The object of the fold is to protect the delicate skin of the glans during childhood, and its recession is gradual as puberty is neared. If too early exposed, the excitation is increased, masturbation and excessive venery are encouraged, and the child is subject to contracted meatus and other evils of condensation of tissues. He has also to endure the mortification of boyish taunts. Furthermore, cleanliness of prepuce and of mind are far more potent averters of syphilis than is circumcision.

It is idle to class this operation among Mosaic sanitary laws. It was ordered long before the time of Moses, not upon hygienic, but upon religious grounds, as a distinctive mark. Its adoption by other nations was undoubtedly due to the fact that their superstitious minds easily accepted the theory that by thus mutilating themselves, the acknowledged blessings showered in past times by the Almighty upon this "peculiar people" might be secured to themselves, since this was the only outward and visible sign of difference. Such barbaric sacrifices are not infrequent, and those who practice this rite are certainly not noted either for their morality or cleanliness.

As to the existence of reflex symptoms from a contracted prepuce, there is no question. Anatomically, the explanation is easy, and similar effects are seen in nervous irritations in other parts of the body. Gastric, uterine and dental disturbances are common, neuromata, foreign bodies, coxalgia, empyema, fissure of the anus, all act at times to produce a peculiar train of phenomena. Why, then, should not an irritant acting upon nerves confessedly the most excitable in the body, give rise to most grave results, affecting permanent nutrition as well as temporary nerve currents? That these results do not always follow compression of the glans and the retention of smegma, is no argument against the existence of such causes. Depressed fractures of the skull are not always followed by serious results, and many nerve injuries are produced without the occurrence of tetanus, yet this does not prove them to be harmless.

Adherent prepuce will be found in babies so constantly that it may be looked upon as almost normal or as a continuation of the intra-uterine condition. Hence, it must be remembered that serious brain and spinal disease should not be overlooked
as a factor in the production of muscular weaknesses, since the tight prepuce may have little or nothing to do with such result.

On the other hand, when no central lesion exists, the simple stripping of the glans will convert many a feeble, puny, ill nourished, wakeful, irritable boy into a healthful and happy child. Too little attention is ordinarily paid to this sexual cause in its early symptoms; as just indicated, but prompt action at this stage will often avert the later and more serious consequences; in fact, I believe that reflex paresis is always preceded by the symptoms of nervous irritability, and can often be prevented by timely action.

If the profession will watch more carefully they will find many cases of apparently obscure malnutrition that can thus be easily explained, and it is certainly a comfort to feel that only a small proportion of the younger ones will require circumcision.

To summarize: 1. In infants, strip the glans in all cases where urinary, nervous or muscular symptoms arise. A freely-moving prepuce is more healthful than a naked glans. Cleanliness is the best safeguard against disease, and is to be insisted upon all through life.

2. Incise or dilate all cases of moderate contraction.

3. Circumcise boys over ten years of age, and adults when the glans cannot be exposed, and all other cases where reflex symptoms of genital origin arise, and in whom the foregoing measures fail to give a freely-sliding foreskin.

Dr. I. N. LOVE, of St. Louis, said:—The tenor of the remarks during this discussion has been in the direction of conservatism. It has been my judgment and my practice for many years in these reflex irritations to pursue the radical course of circumcision. I believe thoroughly in the Mosaic law, not only from a moral but also from a sanitary standpoint. All genital irritation should be thoroughly removed. It is all very well to instruct the mother or the nurse to keep the parts within the prepuce clean, but they cannot or they will not do it. Complete and proper removal of the covering to the glans takes away all the cause of disturbance.

Dr. Sayre takes a more pronounced position on this subject than the majority of those who have discussed his paper. An improper performance of a surgical procedure is no argument against the operation, but rather against the operator.

For the reasons I have given, I am in favor of the radical application of the Mosaic rite of circumcision.

Remarks by the President:—That a considerable number of ailments or morbid conditions result from a narrow prepuce or preputial adhesions, either directly or through reflex action, is now generally admitted, and no one has done more to disseminate a knowledge of this fact than the author of the paper to which we have listened. Sometimes the causative relation of a narrow prepuce and preputial adhesions to the symptoms is very apparent, as in the following case, which was recently treated by me: F. P. L., aged twenty-three months, had been more or less fretful during micturition since the age of three months. During the last year he had been restless at night, and had apparently been in pain during the half hour and sometimes even two hours preceding urination; at such times he often applied his hand to the penis or drew upon the prepuce; sometimes he pressed the hand of the nurse or mother to the penis. Various medicines had been given without benefit; examination of the urine gave a negative result, and there was no external evidence of inflammation in the parts affected. The child was firmly held by the mother and nurse, the foreskin was drawn forward by the thumb and finger, and the point of the
small two-bladed forceps, commonly used for the ear, was introduced into the pin-hole orifice of the prepuce. By gradually separating the blades the prepuce was stretched. On the second day the operation was completed, the prepuce was retracted beyond the glans, and the masses of smegma, white and firm, were removed. They had produced inflammatory redness and thickening of the preputial mucous membrane which surrounded them. By daily uncovering the glans, smearing it with vaseline and returning the prepuce, the dysuria soon ceased and the child has remained well. It is probable that onanism as well as the dysuria was prevented by this simple treatment.

In many instances the causative relation of the preputial disease to the symptoms which it produces is not so apparent as in the above case, but after correct treatment of the prepuce they disappear. There is one result of phimosis which I did not observe that either Prof. Sayre or those who contributed the material for his paper noticed. The expulsive efforts accompanying urination sometimes cause prolapsus recti, and frequently cause inguinal hernia. In a lecture before the Harveian Society (British Med. Journ., Feb. 28th, 1880), Edmund Owen, Surgeon to St. Mary’s Hospital and to the Hospital for Sick Children, says: "Perhaps the commonest cause of hernia in childhood is a small preputial or urethral orifice, and next to that I would put the smegma-hiding or adherent prepuce." Arthur Kempe (London Lancet, July 27th, 1878), Senior House Surgeon to the Children’s Hospital, says "Phimosis is a common occurrence, and numerous ill effects can undoubtedly be attributed to it;" and he alludes to the observations of Mr. Bryant, as published in his book on the "Surgical Diseases of Children." "In fifty consecutive cases of congenital phimosis, thirty-one had hernia, five had double inguinal hernia, and many had umbilical hernia besides. In no one was the hernia congenital, its earliest occurrence being at three weeks. Circumcision was performed in these cases, and all were much benefited."

Dr. Sayre, in concluding the discussion, said that he was very glad to find that Dr. Willard and others who had formerly disagreed with his views—and some of whom had censured him rather severely—had now come to the conclusion that he was correct, and agreed with him that any constriction of the glans penis was a source of irritation to the nervous system, which should be relieved either by stretching or incision. In all cases where the relief can be accomplished by stretching, of course incision is entirely unnecessary, but there are some cases where not only incision is necessary to relieve the constriction, but where absolute circumcision is a necessity, to remove a portion of the redundant and contracted prepuce. But even in these extreme cases the operation should be so performed as to leave sufficient prepuce to cover the glans, but should be so arranged as to glide freely backward and forward over the glans without any constriction.

As to complete ablation of the parts under all circumstances, as recommended by Dr. Love, I must enter my strongest protest.

The cases of hernia and prolapsus of the rectum referred to by Dr. Smith have been so fully described in my previous papers that I have not referred to them here. That hernia and prolapsus of the rectum should be produced by the constant straining at micturition through a constricted prepuce, and that both of these infirmities should be immediately relieved by removing the constriction, can be easily understood, and I certainly feel very happy that I have drawn the attention of the profession so strongly to this important subject; and to now find that my views are so universally endorsed by the profession as being correct!