

SAYRE (L.A.)

SPINAL ANÆMIA

WITH

PARTIAL PARALYSIS AND WANT OF CO-ORDINATION,

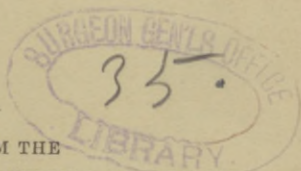
FROM

IRRITATION OF THE GENITAL ORGANS.

BY

LEWIS A. SAYRE, M.D.,

OF NEW YORK.



EXTRACTED FROM THE
TRANSACTIONS OF THE AMERICAN MEDICAL ASSOCIATION.

PHILADELPHIA:
COLLINS, PRINTER, 705 JAYNE STREET
1875.

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SPINAL ANÆMIA WITH PARTIAL PARALYSIS AND WANT OF CO-ORDINATION, FROM IRRITATION OF THE GENITAL ORGANS.

IN 1870 I presented to the American Medical Association a short paper upon *Partial Paralysis from Reflex Irritation, caused by Congenital Phimosis and Adherent Prepuce*, illustrated by several cases, and published in their *Transactions* of that year.

This paper produced a marked effect upon the professional mind, as I received letters from all parts of our own country, as well as from some of the most distinguished surgeons of Europe, thanking me for the explanation given and confirming the views expressed, by the narration of cases which had come under their own personal observation, but which, until this explanation had been offered, they had not thoroughly comprehended.

Dr. Atlee, of Lancaster, Pennsylvania, wrote me that on reading the paper it brought to his mind a case at some distance from his residence which he had seen several months previous without fully understanding it; but that the explanation made it so clear to him that he at once visited the family, explained it to the parents, and performed the operation, which was followed by the perfect recovery of the use of the child's limbs.

The following letter from Dr. Pitcher explains the same idea:—

“DETROIT, Dec. 3, 1870.

“LEWIS A. SAYRE, M.D.

“*My Dear Sir:* I have read with pleasure your pamphlet on the subject of *Partial Paralysis from Reflex Irritation* which you were kind enough to send me. It enables me to study a case sent to me from the interior of this State some time since from a new standpoint. Others I am sure will thank you for the use of this key to unlock some of the obscurities we meet with.

“With respectful consideration, I am

“Yours, etc.,

Z. PITCHER.”

Many similar letters were received from different sections of the country, and some of them describing cases of hernia, and others prolapsus of the rectum dependent upon the same cause, and which had been relieved by the operation.¹

The same ideas suggested by me at the time, also occurred to Mr. Barwell of London, who, in his *Lectures on Infantile Paralysis*, gave a very vivid description of the peculiar form of paralysis dependent upon irritation, caused by adherent prepuce, and stated that the fact had never before been observed; but upon reviewing a copy of the *Transactions* containing the article, he wrote me a beautiful letter, acknowledging my priority of observation and description, but fully confirming the views expressed, and stating that he had seen a number of cases which he had traced distinctly to this cause, and which recovered by proper treatment.

So many cases of a similar nature have come under my observation since that time, some of them being aggravated by other and more serious nervous complications, that it has seemed to me proper to bring the subject before the profession more fully, as I am well satisfied that there are many grave affections of the nervous system attributable to this cause that have not, as yet, even been suspected. Some of these cases have been in children of the opposite sex, and I have, therefore, headed my paper "Irritation of the Genital Organs," as each sex seems liable to the same exciting cause.

I have no theory of explanation that is perfectly satisfactory even to my own mind, and for that reason I have brought the matter before the Society for a more elaborate discussion, and to see if we cannot obtain a true explanation. It has seemed to me in many cases that an anæmic condition of the spinal cord is in some way connected with the disease, as some of the patients lose entire muscular power, even the power of speech, in the erect posture, and yet, lying upon their backs for some little time, and when the cord could be nourished with more blood, they could, in a measure, recover the power of speech and motion.

It may, however, be a hyperæmic condition of the cord, instead of

¹ Congenital Phimosi.—*Vide* Med. Times and Gazette, May 16, 1868. Clinical Lecture by Mr. Thomas Bryant on "Adherent and Elongated Prepuce; eight cases illustrating incontinence of urine, difficulty of micturition, pain, intermittent flow, prolapsus recti, hæmaturia and priapism dependent upon the condition of the prepuce."

anæmic, the paralysis being produced by over-pressure on the nerves from an engorged condition of the vessels.

As before remarked, I have no fixed theory upon the subject, and will, therefore, simply present the cases, accurately detailed, and let the Society make such explanations as they think proper.

CASE I.—In March last [1874] I received the following letter from a highly cultivated lady, the daughter of one of the most distinguished surgeons of our Southern States, and as it is such a graphic recital of her child's disease, I have obtained consent for its publication, and, therefore, offer such parts as seem apposite:—

“ WASHINGTON, D. C., March 7, 1874.

“ DR. SAYRE.

“ *Dear Sir*: I have a child, now three years old, who has never walked; never reached out his hands to take hold of anything; he has never talked, and, I venture to add, has never used his eyes to look at any object; and yet there is no blindness, no paralysis, and the child is intelligent.

“ He was born with a urinary trouble, and has suffered in those parts all his life—at times is a martyr.

“ A physician here has traced a case on record where Dr. Marion Sims writes you a letter to visit a little fellow whose legs were crooked, and perform some operation for paralysis. In that case you describe my baby's symptoms exactly. You questioned the nurse, and the result was not an operation for paralysis, but circumcision.

“ All the physicians of the Union, excepting yourself and some others of New York, have seen the child. He is so strong, so beautiful, so full of life, I cannot give him over to such infirmity.

“ I am the daughter of a physician of celebrity in L——, and, although he is no longer living, I feel that I have a claim upon the profession for my son's peculiar infirmity.

MRS. W. B. E.”

As it was impossible for me to leave for Washington (as was requested) at that time, I was compelled to postpone my visit until after the lecture season was over, and some professional engagements would allow me the opportunity. During the delay I received numerous communications, the last one of which is here presented.

“ WASHINGTON CITY, Sunday, March 29, 1874.

“ *Dear Doctor:* The period of your delay from our little one has now expired, and we are watching the trains with beating hearts, hoping every day to see you.

“ We feel assured that you will deliver our little darling from his sad thralldom, and we beg that you will no longer delay your coming, and you will have the blessings of a mother who has passed three years in anxious vigils and tears.

MRS. W. B. E.”

That evening I left for Washington, and fortunately I found in the same train my friend Dr. Keyes, of this city, who was going to the same place. We arrived in Washington about seven in the morning, and on our way to the Arlington stopped at the hotel of the lady. I requested Dr. Keyes to see the case with me, as it was possible I might require his services during the day. The child was brought into the room presenting almost the exact appearance seen in photograph of page 266, which being almost impossible to describe, I refer to the picture.

The following is the history as taken at the time:—

Wm. R. E., aged three years four months. Born in New Orleans of healthy parents on 10th November, 1870. Was perfectly natural at birth, and sight was good. For some days passed no urine. Was subject to severe fits of crying which were thought to be due to colic, and for which various remedies were used, until, accidentally, the mother discovered great erection of the penis. Applied hot fomentations over the parts with immediate relief, since which time the mother has always resorted to the same means with equally good effect. Has frequently through the day what the mother terms “ spasms of ecstasy” in which he laughs immoderately, and his eyes are bright and glistening, but yet he apparently sees no object, and the penis is in a state of extreme erection. Dr. Levis, of Philadelphia, examined his eyes in 1871, and stated that there was no amaurosis or blindness of any kind, that everything belonging to the structure was normal, and yet he could not see, and he could not explain the case.

Present condition, April 1, 1874. Very large and well developed child; rather white. Unable to stand; incapable of voluntarily contracting any of his muscles when standing, or rather, when being held in the upright posture, as it was impossible for him to stand, but when lying on his back for some time can move

his hands and can turn over; but when held upright his legs always spasmodically cross each other, hands close, wrists flex, elbows the same; in fact, all the adductor and flexor muscles act, and produce a strange distortion: the mouth opens, and there is a vacant stare of idiocy with a curious laugh of half intelligence.

The penis is in a state of almost constant erection, and greatly excited at the least irritation. The orifice is red and tender.

Teeth nearly all destroyed by medicine, and is now nourished on a bottle.

Assisted by Dr. Keyes, of New York, I examined him carefully and found the prepuce firmly adherent to the glans and very much constricted at the orifice. A probe passed into the bladder found all natural.

I immediately nicked the prepuce and tore it off from the glans; tore the frænum and completely uncovered the organ. Nearly a complete circle of hardened smegma was behind the corona. Considerable hemorrhage following, rags dipped in persulph. ferri were wrapped around the penis, and in less than an hour the child had fallen asleep without any opiate or narcotic of any kind, a thing the mother states had never occurred before.

She says that in his states of "ecstasy" nothing will quiet him, although he has frequently taken doses sufficient for an adult, of chloroform, paregoric, bromide of ammonia, hot toddies, all without effect, his frenzy of laughing and curious actions continuing until she applied very hot water to the privates and opened the window and let the air blow upon his face.

At 5 P. M. called to see the child, and was amazed to see him put out his hand to shake hands with me the very moment he heard my voice. He could not speak, and I am not certain that he saw me, but he gave the most marked evidence of delight at my presence, although I had hurt him so badly only a few hours previous. His mother almost swooned with delight, and said it was the first time he had ever put out his hand to take hold of anything in his life. He seemed to comprehend what she said, and expressed in his queer way great satisfaction. The mother stated that formerly whenever she went to Dr. Pancoast's office he would always cry the moment she opened the door, and the same thing occurred with all the different physicians who had seen him more than once or twice.

At 8 P. M. called with Dr. Busey, and found the child sleeping perfectly natural, with his mouth closed, lying on his side, and

knees bent up, but legs *not* crossed; his hands *open*, wrists extended, in fact, as perfectly natural as any child, and which the mother states is the *first* time this has ever occurred in his life.

April the 9th, 1874, I received a letter of the warmest thanks and congratulations, and among other things containing "To you the great satisfaction of relieving the poor little fellow of excruciating pain almost every hour of his life. His wound is healing fast, and, strange to say, the little parts seem to have grown. . . . It would do your very heart good to hear his roar of laughter as he sits frolicking in his father's arms."

"Most gratefully,

MRS. W. B. E."

This child was directed to have a mechanical support to its head and trunk, and limbs to be kept in a proper position, and to be put upon a more nourishing diet.

A few days afterwards I received the following letter:—

"His body has assumed natural, flexible positions; his little hands, which have always been tightly clenched, are open and natural; he looks more and more natural every hour; his bowels act naturally, not having to resort once to his daily remedy—the enema—since your operation upon him. It is just one week since the operation. The little fellow does not wake until between six and seven in the morning, ate a whole spring-chicken of respectable size for his dinner yesterday and two snipe and a slice of buttered toast and a whiskey toddy for his dinner to-day. He holds a chicken bone in his hand now, and when it is guided to his mouth he bites it in an ecstasy of delight. His little parts seem to have grown considerably, notwithstanding the soreness of the wound."

I saw this child again on January 7, 1875, and found it immensely improved, although the treatment had not been efficiently carried out, no support having been given to the head. It could not hold its head up with the strength of the normal child, although it could sit down and get up and stand balancing itself without assistance; could speak several words and had acquired the power of eating—could chew its meat without difficulty.

Of course, this case requires long-continued careful treatment by manipulation, friction, and such constitutional remedies as are indicated to restore nervous vitality. In a letter from the mother dated Washington, March 20th, 1875, she says, "Baby begins to

talk, understands accurately, and is growing fat—eats half a pound of mutton at a meal, *provided it is Southdown.*”

CASE II.—F. A. A., sent to me for treatment by Dr. Paul F. Eve, of Nashville, æt. 2 years, came to my office May 15, 1874. He was a well-developed child and quite intelligent. Father died of heart disease; mother in fair health. This is the third child; two children were lost in infancy. Has been reared by the bottle, all meats strictly forbidden to be used; child quite eager for meat, but is not allowed to have it. Said by some to have scrofula. Child walked well until last September, when he had slight fever for a few days resulting in a loss of power in the lower extremities, being more marked in the left leg.

Present condition. He has very little control of the left lower extremity, which can be drawn out about an inch longer than the right, due to the relaxed condition of all the muscles of the thigh and leg.

The right limb is very weak, but the muscles seem more firm, and have more power than the other.

Measurement shows half an inch atrophy of left leg.

Mother notices that the boy is very fretful, restless at night, peevish in the day, and that his penis is often excited. Muscles respond to electricity.

Diagnosis.—Congenital phimosis exists, and is, probably, the cause of the partial paralysis now existing in the lower extremities from reflex irritation.

May 16, 1874. I operated upon this case, assisted by Prof. W. H. Pancoast, of Philadelphia. Prepuce clipped off, mucous membrane torn off to the corona, dressed back with oiled rag.

23d. The child throws his left leg about readily and is daily gaining power in the entire extremity. Used electricity.

27th. Boy walks several steps alone. Electricity daily.

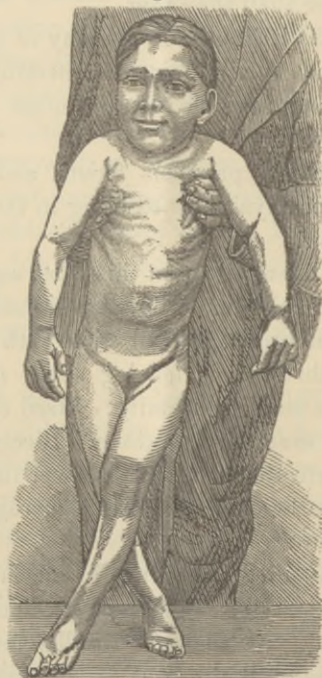
30th. Almost perfect control of left lower limb, only too much bending of the knee backwards. Muscles regaining power rapidly. Boy always on the go.

June 4. Brace to support the knee has been used several days. Boy uses both limbs readily. The penis is uncovered (with ease) daily. He returns home to-day. Walks anywhere about the house with *perfect* use of limbs. Was directed to use electricity for some time.

CASE III.—L. H. W. (female), *æt.* 3 years and 9 months; was delivered by forceps, first child. Mother's age, 36. Child was resuscitated after two minutes. The mother during pregnancy suffered from muscular rheumatism. Child's health has never been perfect since birth, has always suffered from the present trouble. When the child began to crawl she would lie on the floor, but unable to roll over. Then, when the age came for the child to sit up, she was unable to keep the body upright. She had power over all the joints (and they could all be placed in normal positions), excepting that there was want of power of keeping the trunk erect. Some kind of infantile paralysis was suspected, but not clearly made out. Treatment has been iron, tonics, phosphorus, cod-liver oil, and electricity applied to spine morning and evening, without any apparent improvement except what might fairly be attributed to time. The condition has been from the start what it is now. Lives on milk diet, meat, etc.

Present condition (as seen in Fig. 1).

Fig. 1.



When she is held up, as it is impossible for her to stand, adduction of both limbs, crossing similar to those of Mary B. (to be

hereafter described). The adductors are tense and the tendones Achillis also, although no spasm is excited by pressure, and the tension may be voluntary.

The clitoris is red, and when it is touched there is excited a spasm of the thighs. Child never *sat alone* or made any efforts to stand erect. Suggested to watch the child in order to ascertain if the trouble is dependent upon genital irritation, and decided, if this seems to be the probable cause, to relieve it by an operation.

28th. Child chloroformed by Dr. Yale, after which I made pressure on the clitoris, and a marked spasm of the entire body was produced as from the shock of a galvanic battery, although the child was perfectly anæsthetized at the time. Removed the clitoris; some bleeding vessels were cauterized with nitrate of silver; wire breeches used to confine the limbs, and ice bags applied to the wounded parts.

30th. The child sat alone to-day for a minute, the first time her mother ever saw her even *attempt* to sit erect.

31st. Divided the tendones Achillis and replaced the child in the wire cuirass.

June 20. Divided the adductors on either side near the symphysis pubis, and kept the legs abducted by applying two iron rods twelve and fourteen inches in length to the heels and soles of her shoes.

July 4. Girl moves her limbs readily and has more power over her body. Contraction at the knee daily lessening. Electricity to the spine has been employed the past two days.

10th. Wheel-crutch is used with good effect in exercising her limbs; when she left for her home.

CASE IV.—August 4, 1874, I was called in haste to the St. Nicholas Hotel to see a case of retention of urine, and found Mr. A., æt. 52; a strong man; never had his glans penis uncovered; prepuce redundant; frænum very much contracted, causing the urethra to be patulous and irritated. Lately has been suffering from paralysis of the bladder. Had not passed urine for forty-eight hours.

I drew off his urine, and the following day again passed the catheter; slit up the prepuce, which I found almost cartilaginous, and which did not bleed until half an inch had been divided; nicked and tore back the frænum and freely exposed the glans. No adhesions around the glans; slight bleeding, arrested by styptic cotton.

Reflex irritation from the end of the penis had caused spasm of the neck of the bladder, which was the original cause of the retention or loss of power in the bladder to force water.

6th. Passed his water voluntarily, and has continued to do so ever since.

CASE V.—Charles E., æt. 3½; was sent to me by Dr. Douglass, of Roundout, October 12, 1874, for some lameness of his right leg, “but for which it was impossible to discover any cause.” He was well developed, but rather pale. The father states: “He is always very active but very clumsy, constantly tripping and tumbling down. I have noticed particularly,” he says, “his tripping in going up the steps in the back yard, and once he fell, cutting his forehead, on which now there is quite a scar.”

On stripping him, I could find the slightest difference in the nates, the right being a very little smaller than the left, but the ileo-femoral crease was the same as upon the opposite side.

When I laid him upon his back, the first thing that attracted my attention was his penis, which was rather large and in a state of extreme erection. The orifice of the urethra was very large, wide open, and exceedingly red. The prepuce was firmly adherent to the glans all around the orifice of the urethra, thus drawing it open when the organ was erected. The father states that his wife had *often* spoken to him about the “extraordinary size of the organ and its frequent stiffness.” He is very restless in his sleep, constantly shifting and talking.

Very slight pain on complete abduction and eversion of the right thigh. Extension, adduction, and flexion perfect. No pain on concussion, and, consequently, there could be no disease of the hip-joint.

Diagnosis.—Partial paralysis from congenital phimosis, and the soreness of which he complains being due to the bruises from frequent falls. Recommended circumcision.

December 10, 1874.—I received a letter from his physician, Dr. Douglass, stating that he had circumcised the boy, assisted by Dr. George C. Smith, October 15, 1874, and that the child was now perfectly well.

CASE VI.—In December, 1873, I received a letter from Dr. Brigham, of California, asking my advice in regard to a case of acquired paralytic club-foot. From the description of the case given me in his letter I was led to suspect irritation of the nervous

system from phimosis, and wrote him to that effect, inclosing a pamphlet upon the subject.

I received the following letter from the doctor, dated San Francisco, February 27, 1874:—

* * * * *

“As soon as possible I examined the child’s penis, and found an elongated prepuce with adherence to the glans its whole circumference. I performed circumcision, and then, not being able to free the glans by the finger, I made a slight incision around the adherent part, and was then enabled to tear it down properly. Considerable glandular secretion was washed away.

“The improvement in the child’s leg since the operation has been marked. It is no longer cold, but is of the same temperature as the other. No electricity or rubbing has been used since.

“The legs before the operation measured as follows, January 24:—

Ankle, well limb,	6 inches;	diseased limb,	5 $\frac{5}{8}$ inches.
Calf, “ “	8 $\frac{3}{16}$ “	“ “	7 $\frac{7}{16}$ “
Knee, “ “	7 $\frac{3}{4}$ “	“ “	7 $\frac{9}{16}$ “

“The operation was performed January 27, and, on the 28th of February, they measured as follows:—

Ankle, well limb,	6 inches;	diseased limb,	5 $\frac{3}{4}$;	gained	$\frac{2}{16}$.
Calf, “ “	8 $\frac{3}{16}$ “	“ “	7 $\frac{1}{2}$;	“	$\frac{1}{16}$.
Knee, “ “	7 $\frac{3}{4}$ “	“ “	7 $\frac{3}{4}$;	“	$\frac{1}{16}$.

“The change is considerable, the knees being now of the same size. The child walks better, and, I think, we have reason to expect an excellent result.

“Hoping to be able soon to report still more favorably of the child’s progress, I remain,

CHARLES B. BRIGHAM, M.D.”

CASE VII.—Sept. 20, 1873, the following case was sent to me for idiocy, and on account of her inability to stand. She was five years of age, and the annexed figure (Fig. 2) gives a tolerable idea of her appearance. In the picture she is held up by the operator, which prevents the deformity from showing as conspicuous as if she had attempted to bear her weight upon her feet. When she attempted to stand, the limbs crossed so far that the nates nearly touched the floor, and she looked idiotic; chin resting on the sternum, mouth open, saliva flowing out of it, eyes wandering, head and hands in constant movement, and expression of stupidity.

In horizontal posture, after a few moments, her entire countenance changed to that of intelligence. After a short time she began to talk, and talked sensibly. Put her in the erect posture

Fig. 2.



again, she soon assumed the same look of idiocy and lost the power of speech entirely; the limbs immediately became strongly adducted.

When I again laid her upon her back she improved in her intelligence, and her limbs could be easily abducted, and in this position she had the power of voluntary contraction of nearly all the muscles of her limbs. The clitoris was very red and much enlarged, the slightest friction upon it throwing her into a peculiar spasm.

I therefore diagnosticated the case as one of spastic contractions of certain muscles, and partial paralysis of others, from anemia of the spinal cord and arrest of development, probably from peripheral or genital irritation.

Treatment.—Secured her in the wire cuirass, as seen in Fig. 3. Clitoris clipped and cauterized, with ice applied. Child recom-

mended to be kept in horizontal posture, to be taken into the open air; nutritious diet, cod-liver oil, iron, and phosphorus.

Fig. 3.



Three months later I heard from her physician that she was immensely improved, and in June last was able to walk without assistance, and had acquired coördinating power.

CASE VIII.—C. H. W., aged three years. Double varo-equinus, congenital. Treatment, mechanical, was applied when child was four months old, and continued ever since. Has on now a pair of braces which the mother thinks have bent his legs; he was, therefore, sent to my clinic at Bellevue Hospital Medical College, in November, 1874, for the purpose of having tenotomy performed. At that time there was extreme varus of both feet with the usual callosities over the outer malleoli, from pressure against the iron bars which were used for straightening the feet. The feet were readily replaced in normal position by the hand, but immediately returned to their deformed posture when the support was removed, showing the deformity to be of paralytic origin.

The child was suffering from phimosis; the mother states the urine sometimes dribbling, sometimes being retained, and passed with great difficulty. Priapism, as she also says, had been frequent from birth, and the child sometimes complained of pain of the penis. I circumcised the child before the class, and applied no

treatment whatever to his distorted feet, in order to see what effect this nervous affection had had in producing the deformity. The mother returned at the end of two weeks, stating that the child had been perfectly quiet every night since the operation, sleeping without any disturbance, and passing his water without difficulty, which had never occurred before. He ate well, was very much improved in his general appearance, and could stand flat on his feet without any assistance. Upon stripping the child's feet the mother's statement was fully corroborated, as will be seen by the annexed figure (Fig. 4), which was taken immediately after by

Fig. 4.



Mr. Mason, photographer to Bellevue Hospital, just two weeks from the operation. As will be seen, the child stands perfectly flat upon the feet, with simple inversion of the great toe of the left foot, only two weeks having elapsed since the operation. The increased muscular power without the addition of any electricity has been almost marvellous, and now by the application of the galvanic current to the perineal muscles we have a prospect of the perfect recovery of the child without any further mechanical support.

Since the preparation of this paper, and, in fact, only this evening, I have been presented a paper upon the same subject by Dr. F. N. Otis, of this city, which was read before the Academy of Medicine, in February, 1874, but never published until this time, and, therefore, I was not familiar with its contents, which I exceedingly regret, as some of the facts contained in Dr. Otis's paper were so perfectly in accordance with my own observations that I would like to have made extracts from it.

This paper was prepared for the Society of Neurology and Electrology, and read at their meeting March 1, 1875, and the president, Dr. Meredith Clymer, considered it of so much importance that he directed it to be made the subject of special discussion at the meeting of March 15.

This discussion took place at the time appointed, and was participated in by many of the profession present; but the remarks of Dr. Otis, which were phonographically reported by Mr. George, were such a corroboration of my own observations, and so remarkably similar in the history of some of his cases and the results of treatment, that I have obtained from Dr. Otis the privilege of appending his remarks to my paper, as they show that the same facts have been noticed by different persons without the knowledge of each others' observations.

Discussion on a paper by Lewis A. Sayre, M.D., entitled "Reflex Paralysis and Want of Co-ordination, from Genital Irritation." Read before the Society of Neurology and Electrology, March 1, 1875.

Dr. OTIS. I am very happy, Mr. President and Gentlemen of this Society, to have the opportunity of confirming, through a somewhat extended acquaintance with similar reflex irritations, the facts which Dr. Sayre has delineated in his valuable paper. Dr. Sayre's observations seem to relate chiefly to the effects of preputial contractions and adhesions, and irritations of the clitoris; but, in my own experience, genito-urinary affections, giving rise to reflex phenomena, have not been restricted to the prepuce and clitoris, but have extended to the entire genito-urinary tract. In a paper which I read before the New York Academy of Medicine, in February, 1874, there is a *resumé* of nineteen cases of reflex

irritations, most of which were apparently due to urethral stricture. Several, however, exemplified in a marked degree the capacity of preputial inflammation and contraction to produce grave reflex disturbance in organs remote from the source of trouble.

Case 1.—The personal case related to me by Dr. Brown-Séquard was of a man, at first believed by him to be suffering from advanced cerebral softening, but which, almost accidentally, was found to be the subject of contraction of the preputial orifice, associated with a severe balanitis. This, relieved by circumcision, brought about a rapid and complete recovery from brain symptoms, differing in no appreciable way, from those arising through organic cerebral disease.

Case 2.—A child 8 months old came under my observation, some two years since, suffering from retention of urine. A contraction of the preputial orifice was present, that scarcely admitted the entrance of a fine silver probe. This I slit up freely, and went to my office for a small catheter, with which to relieve the retention. On my return (within an hour), I found that the little patient had, in the interval, urinated several times; completely emptying the bladder. I was informed that this child suffered from a partial *paraplegia*, immediately subsequent to the retention; from which, however, he recovered in a few weeks without medical care.

Case 3.—A badly nourished boy, 12 years of age, of scrofulous parents, had been under my care for several years, during most of which time he was under treatment for troubles supposed to be dependent upon a strumous diathesis. He took but little interest in the sports of childhood, and clung constantly to his mother. He was habitually dull, listless, careless, and irritable, and suffered from enfeebled digestion and frequent headaches. He was also troubled with enuresis; passing his water several times, unconsciously, during the night, and habitually wetting his clothes during the day. Finally, Dr. Fordyce Barker saw the lad with me in consultation, and after an exhaustive consideration of his case (in which the probability of a malarious element was suggested), a somewhat different course of treatment was decided on; the use of the ext. of belladonna (which in $\frac{1}{4}$ gr. doses had been found to control in great measure the enuresis) was continued. This course was pursued faithfully for several months but with no apparent benefit. One day the mother called with the boy to have the prescription for the belladonna renewed. I took this

opportunity to examine, for the first time, the condition of the genito-urinary apparatus; I found the penis of normal size, but with a very redundant prepuce, with contracted orifice. Explaining the possible dependence of the enuresis upon the abnormal condition of the prepuce, the parents readily consented to my proposal for circumcision of the child. This I did soon after. During the operation the prepuce was found firmly adherent to the glans, for nearly one-half its extent, and the meatus urinarius was contracted to No. 12 f. After completing the circumcision, I divided the contracted meatus to 22 f. (the apparent normal calibre of the urethra). This was done at about 4 P. M. On the following morning I called, and found that no urine had been passed since the operation, and the lad voided, with slight difficulty, a large quantity in my presence. On the following day, the father sent me word, that his son "seemed to be quite another boy;" that, whereas, before the operation he had an eye like a fish, it was now bright and clear, and that he was in an apparently cheerful and healthful mental condition. The improvement continued both mentally and physically. The enuresis was completely relieved for a little over a month, when it partially returned. Upon examination I found that the *orifice of the urethra* had recontracted to 16 f. I now divided it to 24 f., since which time (now over 4 months) he has had no recontraction and no return of his incontinence.

In a letter from Dr. C. H. Masten of Mobile, dated December 27, 1874, he writes:—

"Following, I furnish you the brief notes of a case, which I fancy will interest you, as it bears so directly on your 'Reflex' theory; a theory which I, for one, believe is ere long destined to become a fixed surgical truth.

"On the 29th of the last month (November) I was requested to see a little boy, the son of a gentleman of this city. The child was 18 months of age, very delicate, pale, fretful, no appetite, languid, complained whenever he passed his urine of pain; was wakeful at night, and in the nightly habit of urinating in the bed. When I was called to see him, from all the description given me by his father, I was led to believe he had stone. Upon examination, however, I found he had an elongated prepuce, and that the preputial orifice was *very small*; congenitally contracted; so small indeed, that I found difficulty in passing into the opening, an ordi-

nary silver probe. I was satisfied that my diagnosis should be 'Reflex irritation,' produced by want of a full and free passage to the urine, through the preputial orifice, and so stated my opinion to the family physician, who had called me to the case; *he laughed*, at the diagnosis. I insisted that I was correct, and proposed to satisfy him, by the results of the simple operation of splitting up the prepuce, '*and nothing more.*' As there was a clear indication for opening the orifice, *before* anything else could be done; he consented; and I performed the little operation; the results show the correctness of *your* theory, and of my diagnosis established thereon. The very next day, my little patient was decidedly improved; he ate well, he slept quietly, and to-day, now one month since the operation, the child is *perfectly well*, and *in better health than ever before*; his father tells me he has gained at least 8 to 10 pounds in weight, and that he gives them no trouble, night or day. I saw the case only three times, and then only went to remove the little sutures which I used to unite the cut edges.

"I look upon this case as a most marked one, to substantiate your views; and send you the outlines of the same, thinking they will be interesting to you, as additional proof of the fact that reflex irritation of the genito-urinary system can, AND IS produced, by these slight contractions. Please excuse the haste with which this is written; when at leisure let me hear from you."

Dr. Francis H. Brown, in charge of the Child's Hospital, Boston, writes: "I have been waiting to see the results of treatment in a case in which I was led by your article on 'Reflex Irritations' to consider one of that character. A boy of 10 years came into the Hospital a few months since, suffering from paraplegia associated with urinary incontinence. The ordinary treatment was pursued for some time, but with little if any benefit. Finally, discovering a severe form of balanitis, with preputial contraction, I circumcised the boy. This resulted in prompt relief from the incontinence, and in a few weeks, he was dismissed from the hospital, *completely cured of his paraplegia.*"

I believe, Mr. President, that many nervous disturbances, which may be *unfelt* at their origin, and which manifest themselves in various, and often curious ways, are due to irritation of the character of those just described; and further, that they may have their point of irritation *in any part of the genito-urinary tract.* Let me cite an illustrative case.

Dr. Y., a physician (aged 62), from one of our Western States, came under my care a short time since, for treatment of urethral stricture. His normal urethral calibre was 36 f. Five distinct bands of stricture were found between the meatus and the bulbo-membranous junction, and were recognized with No. 19 f. bulbous sound. These were all divided at one operation, and 36 f. solid steel sound passed into the bladder. The subject of "Reflex Irritations" had not been discussed; the doctor was quite ignorant that any ever occurred, dependent upon stricture. A few days after the operation he said to me: "Doctor, I may be very foolish, but I cannot resist the conviction that the division of my strictures has resulted in the cure of other troubles which greatly annoyed me. The relief to the pain in my back and groins I can understand, but, that it should affect the cure of *distant* troubles, I do not. For more than a year past, I have been subject to occasional sudden loss of power, in my right wrist and hand, which I have been much alarmed about, fearing it the result of some brain trouble, especially as, during the same time, there has been a sort of ticking sound in my head on the same side. The least exposure to cold would bring on a loss of power of my right fore finger, which, at such times, was quite blue up to the first joint, and bloodless up to the second. Since the operation, the *paresis* as well as the *noise in the head* have entirely left me, and there has been no loss of circulation in the finger, although the exposure to cold has been greater than before." It is now more than four months since this statement was made. The doctor is still under my care, suffering from a chronic pyelitis, and has had no return of his troubles, either of head or hand, and is simply positive, that the relief from these nervous phenomena is due *solely* to the relief from his urethral contractions. If we accept the occurrence of spinal irritation as a possible result of chronic irritations in the genito-urinary apparatus (and there is no lack of evidence in the literature of the subject to prove this), we can readily understand how, from this point, irritations may be transmitted to the most distant parts of the sympathetic and motor nerve distribution. The cases reported by Dr. Sayre, and those which I have just added to the list, prove the fact that irritations located in the genito-urinary tract are capable of producing and not unfrequently do produce grave spinal disturbance.

The first printed matter on the subject of reflex irritations of the genital organs that has come to my knowledge is the *Paper by Dr.*

Sayre on Reflex Paralysis produced by Phimosis and Adherent Prepuce, published in 1870, and I think he is justly entitled to the honor of having initiated the interest in this subject, which, as soon as the frequency and gravity of such cases come to be fully understood, will rank among the most important in the whole range of surgical science.

APPENDIX.

Since this report was presented to the Association, two additional cases have come under my notice, which are appended to this report.

I have also received many letters from different physicians whose observations so correspond with my own that I have added a few of them to this report, as I was authorized to do by a resolution passed by the Association at the time the report was read.

CASE I.—Thos. Burns, aged three years and eight months, was brought to me by Dr. P. Brynberg Porter, of 65 W. 48th Street, on the 1st of June, 1875, to be treated for paralysis of the lower extremities and prolapsus of the rectum.

The doctor had detected the phimosis and constant priapism, and, suspecting that it might possibly be the cause of his trouble, brought him to me for examination.

The child was very peevish and fretful, very costive, and the

mother states that "in straining at stool and in making water his bowel would frequently come down, and give her great trouble in pushing it up."

He began to tumble down very frequently about a year ago, and was growing more and more clumsy in walking. He could not stand alone without support, and, even when supported his legs would bend in different directions, as seen in Fig. 5, from a photograph by O'Neil, June 1, 1875.

Fig. 5.



He was circumcised on the 2d of June. The lining membrane was firmly adherent to the glans, requiring section by the knife before it could be torn off. Behind the corona was the usual hardened smegma, which had produced erosion of the mucous membrane.

The parts were dressed with an oiled rag and cold water.

June 4. The boy could stand without support, and had slept quietly the past two nights.

At the end of twelve days he was entirely well; could walk and run without tripping, and his bowels had become perfectly regular without any prolapsus.

The annexed photograph by O'Neil, July 1, shows the improvement in his limbs.

Fig. 6.



In the picture taken June 1, his shoes had to be laced tightly around the ankle to enable him to stand even with support; but in the last picture, July 1, it will be seen that he stands erect without any assistance.

One of his limbs is slightly abducted in the photograph, but that was on account of his restlessness—it is not so constantly.

CASE II.—John Lovatt, aged three and a half years, brought to me for treatment, September 25, 1875, by Dr. E. D. Morgan, Jr., with the following history: Began to walk when nine months old; walked very well for three months, when mother noticed that he was somewhat lame in left leg, and was very restless at night, wanting to sit up all the time. Electricity and liniments were used without relief.

Present condition—Slight atrophy of left leg. Child very clumsy, continually falling down; foot everted; is sustained by an iron brace on outside of the leg, fastened to an iron sole inside the shoe. Penis very small and in a constant state of erection; meatus very red and papulous.

Diagnosis.—Partial paralysis due to phimosis.

Treatment.—Prepuce slit. Mucous membrane torn back. A thick roll of sebaceous matter removed from behind the corona. No hemorrhage. Dressed with cold water.

Sept. 30, 1875. Child returned very much improved. Walks without the brace, does not fall down, and mother states that yesterday, for the first time in two years, the child ran around the room alone. Appetite improved. Sleeps better than ever before.

LONGVIEW, GREGG COUNTY, TEXAS, June 8, 1875.

Dear Doctor: I take the liberty of mentioning a case of circumcision, which was presented me yesterday, and it being one of curiosity and novelty, performed by a gentleman of our profession possessing some ability, I deem it not amiss to ask your opinion, and narrate briefly its history.

Patient, J. D., aged about 27, white. Health good; habits irregular, and accustomed to dissipation. Has had syphilis (secondary), now suffering from periostitis. Being desirous of circumcision he sought surgical relief, thinking his chances would be lessened if not destroyed against a further attack (syphilitic). About six weeks ago he submitted to an operation; and such were the proceedings as related to me, etc. :—

Anæsthetized. A circular incision enveloping the entire penis was made behind corona glandis about one-quarter of an inch, through integument and adjacent tissues; further back toward abdomen on body of penis, the distance of an inch or more, another incision was made as the former, and completely encircling the entire body. This intervening space between the two incisions was dissected up and removed, and the anterior integument was brought back, and stitched to that on the body of the penis, dressed, etc.

In about four weeks the parts were well, having united by first intention, leaving a dense, hard, girdling, cicatricial tissue about opposite the first circular incision. This cicatrix feels hard and

whipcord in nature, and is even, and smooth, and regular in outline. It is free from pain and tenderness when the organ is quiet, and the integument is movable to and fro, etc.

On each orgasm the parts are girdled, and the most intense pain is felt until the organ has returned to a calm and quiet condition. The cicatricial band becomes stationary in each orgasm, and is a fruitful source of constant irritation, keeping the organ erect, and *his locomotion has been impaired*.

The glans penis is cyanotic, presenting evidences of strangulation, etc. The meatus is large and free, admitting easily of a No. 12 bougie when organ is quiet.

Having for a long time patiently reviewed your lectures per my notes, and finding this process of circumcision not mentioned, and thinking it may offer some consideration for the thoughtful, I have briefly mentioned the matter to you.

Yours truly,

J. H. ADAMS, M.D.

The italics in this case are mine. I wrote the Dr. advising him to watch the case for a few months, and observe if the paresis increased, and then to divide the cicatricial band in a number of places, so as to relieve the strangulation.

I received the annexed letter in reply, which fully explains itself.

LONGVIEW, GREGG Co., TEXAS, JUNE 25, 1875.

Dear Doctor: I have received your interesting and explanatory letter, and proceed to answer.

The subject of my last letter, Mr. J. D., has suffered much, and owing to this, I have nicked the penis in six places, and think it will eventually prove to be of benefit to the young man. I had hoped to witness its effects, girdled as it was, for several months, as you requested, but I was obliged to relieve him of his suffering, and operated on the 22d inst. No symptoms of cellulitis, and doing well, etc.

Since the operation he has slept well; has had no erections, and expressing himself in "perfect bliss." *The impairment in his locomotion from date of my writing till operation, was progressively increasing;* and I am convinced by its rapidity he would have suffered from complete paralysis of lower extremities in a few

months; his digestion had become greatly impaired, and the continuous erections had completely changed him, physically and mentally. His bowels were constipated, obstinately so, but were relieved daily by injections. The lower extremities have a spongy feel, imparting to the sense of touch a boggy sensation. Greater weakness was referred to medio-tarsal junction of left foot, and more general in the whole of the right leg, having no special location, etc.

Examination of his urine from the time he came under my charge had averaged 24 ounces daily, and highly acid. Since the operation it has increased to 43 ounces, and yesterday and to-day 49 ounces and normal; bowels act of their own accord; appetite good, and *muscular power of lower extremities perfectly restored.*

Yours truly,

J. H. ADAMS, M.D.

ATTICA, FOUNTAIN CO., IND., Aug. 31, 1875.

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

Mr. John McGuire and wife, of our town, have but one child, a boy of fourteen months, who has been the terror of all this part of the town for six months, as he cries continually except when asleep or nursed by his mother. He would lay perfectly quiet 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, Aug. 25th, 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 prolapse of rectum. It would have several spasms at these times, which would come on rapidly and grow more severe at each succeeding time. Late Saturday night, Aug. 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 sufficient to be easily diagnosticated, also 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 grooved director into the prepuce and laid it open with a bistoury. This exposed the glans penis inclosed in a sheath of mucous membrane; the latter adhered to the glans 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, extending almost around the penis. I removed this, and, after making a free incision of the mucous membrane, I washed away the remaining debris and applied water dressing, and in a few minutes left the child almost asleep, not near so nervous, and seemingly in a condition of 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 gland, 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 it, I will report the progress of the case.

Very truly yours,

T. F. LEECH, M.D.

My Dear Doctor: Of a number of cases of reflex paralysis upon which I have 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 hyperæsthesia of the skin over the whole body, very marked want of co-ordination 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 to 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 quantities 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 hyperæsthesia, and in forty-eight hours had 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 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,

JAS. S. GREEN, M.D.,

Elizabeth, N. J.

To LEWIS A. SAYRE, M.D.,
285 5th Ave, New York.

