Operations for Phimosis as a Means of Cure or Relief of some Nervous and other Symptoms.

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OPERATIONS FOR PHIMOSIS AS A MEANS OF CURE OR RELIEF OF SOME NERVOUS AND OTHER SYMPTOMS.

Recent continued success in the relief of nervous and other troubles by the operation of circumcision and breaking down of the adhesions sometimes found existing between the prepuce and the glans penis, has induced me to submit the report of some cases, with a few remarks thereon. Since the date of the publication of Dr. Sayre's operations in 1870—upon reflex nervous disturbances—much has been written both *pro* and *con*. The mass of testimony derived from actual experience has been steadily accumulating to prove the value and truth of his announcement. But notwithstanding this, there are some persons who still seem either to ignore or, at least, to overlook the value of the statements that have been published.

I shall not attempt to enter deeply into the pathology of the troubles attending congenital phimosis, with or without elongation and adhesion of the prepuce, but will be content with a bare narration of facts as they have appeared to me. Research into pathological conditions can never be very satisfactory, for the want of opportunity to investigate the same, since the relief of symptoms almost always ensues upon the removal of the exciting cause, and, should death occur from other causes whilst one was suffering from these troubles, the immediate cause of death would probably mask the condition derived from preputial irritation.

This subject has interested me greatly. My experience has been derived from largely over a hundred

tals in all my cases of hernia in children. I have only seen one case of talipes in girls. In all of those in boys, I have noticed phimosis, adherent or elongated prepuce. In November, 1881, this subject was discussed by the Neurological Society of New York. Having been requested by Dr. Seguin, through my friend Dr. Burnett, to send him a summary of my experience, I forwarded him the following account of some of my cases. This was printed in the report of the proceedings in the *Medical Record* of November 19, 1881. Through some mistake they were credited to Dr. McGuire, of Washington, instead of myself. I will here give them:

Case 1.—J. M., aged 18 months, had been troubled with incontinence of urine for several months. Prepuce much elongated. Performed circumcision January 15, 1876. No medicine was given. Perfect relief obtained. No return of trouble to this date.

Case 2.—J. W., aged 8 years. This boy had continual incontinence of urine for several years; drawers were always wet. Prepuce much elongated and adherent. Performed circumcision April 16, 1880. May 13, 1880, the dribbling during the day had almost ceased. He has passed water in bed four times at night since the operation. Small doses of strychnia were given. There was marked improvement, but not perfect success. Medication was continued. At present he is well.

Case 3—G. T., aged 10 years, April 15, 1880, complained of constant pain in popliteal space of left leg; great weakness of the legs, headache, palpitation on the least exertion. Broke down adhesions which extended to orifice of urethra; gave no medicine. June 22, 1880, perfect relief; no return of symptoms.

Case 4.—January 15, 1880, John D., aged 19 months, cannot walk, stands with difficulty, head is thrown back; is peevish, restless and bow-legged; whines continually. Ordered malt, cod-liver oil and

hypophosphites. May 6, the child is stronger, but the above symptoms still persist. Examined penis. Adhesions broken down and smegma removed; medicine continued. May 20, marked improvement. Adhesions had reunited; again broke them down. August 16, child walks readily.

Case 5.—John B., aged 2 years, has great muscular debility of the lower extremities; locomotion difficult. Prepuce elongated. Circumcised June 21, 1880. On 28th much stronger, walks better. August 16, improvement continues. There is slight inclination to talipes valgus. This case has required constant care up to the present time. His condition now is very favorable.

Case 6.—July 29, 1880, W., aged 3 years, cannot walk readily. Has incontinence of urine. Broke down adhesions and removed a large amount of smegma. October 18, no return of incontinence; walks much better.

Case 7.—Charles H., aged 6 years. This child was very backward in walking; is now weak in lower extremities, has incontinence of urine and inguinal hernia. August 5, 1880, broke down adhesions and removed a quantity of smegma. August 19, marked improvement. September 6, much stronger; no return of incontinence.

Case 8.—C. R., September 23, aged 2½ years, is unable to stand; very little power in legs, muscles of thigh loose and flabby. Circumcised and broke down adhesions. Ordered malt and hypophosphites. October 31, 1881. To-day the child runs around readily.

Case 9.—Jos. W., aged 2 years, August 16, 1880, walks with great difficulty, drags his legs and is easily pushed down. Adhesions were broken down August 23. Walks without dragging his legs. September 27 circumcised him. October 4, marked improvement. The progress in this case was not so decided as in others. Gaiffe's battery was applied. This seemed to be beneficial.

Case 10.—Pierce W., aged 2 years, stumbles on coming in contact with the least elevation; walks very awkwardly. Slight talipes valgus. Circumcised and broke down adhesions. Marked improvement.

Case 11.—Wm. F., aged 2 years, is unable to stand, has laryngismus stridulus. Muscles of thighs and legs very poorly developed. The laryngismus was treated for one week without any improvement, then he was circumcised and the treatment continued. One week later he was better and could stand by a chair. Improvement was continuous and rapid.

Case 12.—Willie B., aged 1 year, is very weak throughout the whole left side. This side is not so well developed as the right. He drags the left foot when he crawls, and has had frequent convulsions. Circumcised and broke down adhesions. Three weeks later the child had much better use of his extremities. The improvement continued. Electricity was used in this case.

Case 13.—E. L., aged 11 years. Incontinence of urine. Broke down adhesions. No improvement.

Case 14.—W. E., aged 4 years. This child had a severe case of talipes equino-varus. The tendo-Achilles was cut and the foot brought into position. About four months afterward I noticed the prepuce much elongated. Circumcised and broke down adhesions. Brace was applied and electricity used. The improvement was rapid and excellent.

Case 15.—Richard G., aged 4 years. Incontinence of urine. Circumcised and broke down adhesions. Perfect relief.

Case 16.—W. B., aged 13 years. This boy had convulsive seizures almost continually, sometimes forty or fifty in the twenty-four hours; would awake and scream out during the night. Easily excited, and would at times be almost uncontrollable. Prepuce elongated and adherent. Broke down adhesions December 15, 1880. Ordered no medicine. I saw him again January 11, 1881. He had not

taken any medicine since I broke down the adhesions one month ago. The attacks during the day had recurred very rarely and the nights were very much less severe. Circumcised him October 23, 1881. The improvement has been decided and continuous. For awhile after the circumcision there was immunity from the convulsive seizures for a week or more at a time. Then they would return occasionally at night. To control this I gave bromide of potassium. Now he goes to school regularly. His teacher gives excellent reports of his behavior and progress in his studies.

Case 17.—Joseph L., aged 6 weeks. This was one of the most interesting and pronounced cases that have ever come under my observation. He had never had a good night's rest since his birth, and had to be drugged to have the least rest. He cried almost incessantly night and day. The legs were in constant motion, sometimes striking the abdomen. The penis was in a state of priapism. As soon as it was touched the convulsive movements were augmented in severity and rapidity. In each inguinal region small tumors appeared when the child cried. I circumcised him March 28, 1881. As there had been such severe muscular action, I ordered ½-grain doses of chloral every hour until quieted. During the ensuing four days he took 8 grains of chloral, then medicine was discontinued. All the nervous symptoms have disappeared. The child slept readily. Three months after the operation, the mother told me that from the second day thereafter, she had not had a particle of trouble with her boy.

Case 18.—B. P., aged 10 weeks. Had not had a good night's rest since his birth. Cried and fretted almost continually. Was in constant jactitation. The urine would accumulate under the prepuce and dribble out through a very small orifice. The head was thrown back on the spinal column. The mother said that she used to pass a handkerchief around the

head and fasten the ends of it to the belly-band to keep it erect. Performed circumcision—did not order any medicine. Every symptom of irritation disappeared. Three months later there had not been the least evidence of return.

Case 19.—A. F., aged 13 years. Had shown great muscular debility in the lower extremities from birth, especially in the left leg. This leg would give way under him. He would fall on the street and around the house. He complained of dizziness and pain in the lumbar region, also had nocturnal incontinence of urine. Prepuce firmly adherent, almost to the orifice of urethra. I broke these down Jan. 19, 1880. No medicine was employed. There was no return of a single symptom except upon one occasion, there was incontinence of urine. He has continued to grow stronger, and is to-day, Oct. 15, 1881, brighter than ever before.

To better understand this subject it will be well to hurriedly consider the nervous supply and connections of this region.

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 urinæ erector penis, and compressor urethræ. 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 vaginæ 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, vesiculæ 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? A. McL. Hamilton, in his "Diseases of the Nervous System" assigns phimosis as one of the causes of spasm. Henoch, in his lectures on "Diseases of Children" attributes incontinence of urine to a spasm of the detrusor urinæ which acts more vigorously because the action of the will on the sphincter vesicæ is diminished during sleep. He says that the urine is always passed in a stream during sleep or in a half waking condition. Amongst various causes for this reflex irritation he mentions first congenital phimosis. The removal of this condition has cured the enuresis. The same author, in speaking of spasm of the glottis,

calls attention to the fact that it occurs more frequently in boys than in girls and almost exclusively between the sixth and twenty-fourth month. I think that every case that I have seen of this trouble, except one, has occurred in boys. In all that I have examined I have found either congenital phimosis or adherent prepuce. Removal of these brought relief. Might we not consider that there was some connection between the two conditions?

Erichsen, after stating that Bryant had shown that various affections of the genito-urinary organs of children, such as incontinence of urine, intermittent flow, hæmaturia, priapism, etc., were due to phimosis, and that Sayre had pointed out the important fact that reflex paralysis in various forms of spastic contractions, chiefly of the lower limbs are due to the same cause, being readily curable by circumcision, says: "In addition to these I have seen general spasmodic affections in children resembling chorea, resulting from congenital phimosis." He also states that he has known it to be a cause of impotence in the adult. Further on he says: "Every child who has congenital phimosis ought to be circumcised, and even those who, without having phimosis, have an abnormally long and lax prepuce would be improved greatly in cleanliness, health and morals by being subjected to the same operation; and it would be well if the custom of Eastern nations, whether it be regarded as a religious rite or only a time-honored custom were introduced amongst us."

Reflex paralysis is 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, hyperæthesia, partial anæsthesia, increased reflex action, spasms and paralysis. Examination disclosed a dilatation of the cutaneous vessels, of the capillaries of the lung and the ramifications of the vena porta, 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, whilst 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 a case of a girl, aged 23 years, who was relieved of a paresis of three week's 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 progagated to the cord in diseases of the bladder.

Dr. Otis has seen many nervous disturbances relieved immediately after the removal of genital irri-

tation and believed that this was more than coincident; moreover, he was firmly convinced that reflex paralysis was possible. Dr. Hammond also admits the possibility of preputial irritation giving rise to paraplegia. Dr. Seguin has never seen reflex paralysis from irritation of the genitals of the male, but had seen reflex nervous troubles, and believed that the genital irritation should be relieved. He had met with paralysis from irritation of the deep urethra and uterine disease. Cure of the uterine disease was followed by rapid recovery from the paralytic symptoms. Dr. Campbell Black has seen hæmaturia, dysuria, incontinence, retention of urine, reflex paralysis, epilepsy, chorea, as well as spermatorrhœa, prolapsus ani, and other troubles from genital irritation. He, as well as Barwell give the priority of calling attention to these troubles to Dr. Sayre. Black attaches immense importance to genital irritation as a source of infantile paralysis and many other indications of nervous disturbance in childhood.

Barwell, ("Diseases of the Joints." Wood's Library, pp. 289 and 290) says: "A good many years ago I was struck with the fact that nearly all the boys admitted for hip disease into Charing Cross hospital had congenital phimosis. In a short time this coincidence was found to be nearly, if not quite constant. At last, in the beginning of 1873, I began to note, in a hundred male cases of hip disease occurring in my private practice or admitted into hospitals, the presence or absence of this condition; for the sake of better classification they were divided into classes:

1st Degree.	2d Degree.	3d Degree.	Elongation.	Normal.
39.	27.	17.	11.	6.

The same divided in ages—

	1st Degree.	2d Degree.	3d Degree.	Elongation.	Normal.
2 to 4,	3.	2.	0.	1.	1.
4 to 6,	7.	5.	2.	3.	3.
6 to 8,	16.	11.	9.	4.	1.
8 to 10,	13.	9.	6.	3.	1.

First degree: The opening in the prepuce, a mere pin hole, so that on retraction no part of the glans or only a minute portion of the uretheral lips could be seen. Second degree, in which all or a considerable part of, but nothing beyond the utheral orifice could be uncovered. Third degree, in which the prepuce, when retracted, uncovered some portion, but only a portion of the glans. Fourth degree, elongated prepuce, projecting more than a quarter of an inch beyond the glans, but capable of entire retraction. Fifth degree, normal. It will be observed that of these cases eighty-three have phimosis; that only six have normally formed prepuces, and that from complete or the first degree of phimosis to which class more than one-third of the cases belong, the number steadily declines to normal. I would also point out that these are not fortuitous coincidences, because for two years at least before commencing tabulation, this association was remarked. Furthermore, I asked my friend, Mr. Morant Baker, to inquire for me about the prevalence of hip disease at the Evelina Hospital, which is largely used by Jews. He tells me that few children are there admitted for hip disease, and that most of those so received belong not to Jewish, but to the Christian community. The important fact, however, is simply, coincidence of phimosis and hip disease—a coincidence which I should never have dreamed of or imagined, had it not been forced upon my observation. Upon the mode in which the one influences the other I would rather not speculate further than to point out that phimosed children have facile, frequent and often long continued priapism; that this condition, unnatural in the infant, must produce after a time a certain irritability or irritation of the lumbar spinal cord; that from this part the various nerves of the pelvis and lower limbs are given off; that the influence of spinal irritation on the trophic nerves is well known; and that just at this particular period large

trophic changes are in progress about the hip joint." During the time that he was collecting these 100 cases in boys, he met with 74 cases among girls. In a large proportion of them he found vulvitis, vaginitis, protruding nymphæ or nymphæ covered by a cuticular surface.

Dr. Sayre noticed this same coincidence, and connected the condition with hip-joint disease by the supposition that the majority of cases of this affection start from a fall or injury. The increased muscular debility from reflex irritation readily contributes to these falls.

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.