

Park. (A. V.)

A Case of Pyelitis of Nineteen
Years' Duration Caused by a
Renal Calculus; Recovery.

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A CASE OF PYELITIS OF NINETEEN YEARS' DURATION CAUSED BY A RENAL CALCULUS.
RECOVERY.

The case I have to present to the Society is that of William P., aged 30 years; of slight physique, medium height; temperament exceedingly nervous, disposition retiring. I saw patient first on May 12, 1885; I found him in great agony—indeed his suffering was excruciating in the extreme. I found the temperature 101 F., pulse 120, respiration 20; complained of severe and distressing pain in the region of the left kidney, a dull aching pain in the lumbar region; sometimes the pain would be sharp and stabbing and radiating about in different directions; there was marked gastric irritability, flatulency and indigestion, febrile disturbance nil, obstinate constipation, and copious sweats would accompany the violent paroxysms of pain. Frequently the attacks would be of short duration, again they would come on instantaneously and the suffering would be intense for two days, and these sieges would be so exhausting to the system that it would require several days to regain his accustomed strength and health, which at best, was habitually deranged. I at this time secured the following interesting history of the case.

The patient said the first attack of this kind occurred when he was but 11 years old, and it was during a convalescence from scarlet fever. The paroxysms of pain would occasionally be of short duration; usually, however, the suffering would be so great that he would be compelled to keep his bed for a day, or two, then there would be a remission of the

paroxysms for a week, and occasionally for a month or two, but the slightest exposure to cold in any way would precipitate an attack. One of the longest sieges, and one which was not entirely unworthy the solicitude of the thoughtful, earnest, skilful physician, was caused by a day's fishing in the rain out at the government pier. His occupation was that of an engineer, and at times when his work was unusually laborious or fatiguing and he exposed himself while covered with perspiration, his old trouble would inevitably follow.

He had received treatment from several of our most successful physicians, and for the past twelve years, the family physician, who during these twelve years had called in a number of our best consulting physicians and surgeons. Microscopic examinations and urinalysis were made time and time again, medicines were given months at a time, and dozens of bottles of proprietary medicines taken without securing the benefit wished, or accomplishing the desired result. During the prolonged attacks, anodynes, hot packs, poultices, and hypodermic medication gave him the most relief, but not infrequently in spite of all medication and the combined skill and associated efforts of the attending physicians, the paroxysms would continue unabated from twenty-four to forty-eight hours. He had become so accustomed to the use of narcotics that it required the administration of almost phenomenal doses to narcotize or produce the constitutional or physiological effect of opium; his long and continued experience with the drug enabled him to say how large the dose and how frequently administered, and the manner it should be exhibited to secure perceptible and satisfactory results.

In all these years of suffering, he had not passed any calculi with his urine. I will modify this by saying, to the best of his knowledge, for he had been instructed by his physician what to look for, and the

entire amount of his urine had been saved and examined day after day for weeks at a time and during his prolonged attacks but always with negative results.

After securing the above history, I gave morphia $\frac{1}{2}$ grain hypodermically, pill opii, 1 grain each every two hours if necessary. At this time I made a very careful examination, following the method advised by the late Professor Gross:¹ The concretion, even if comparatively small, as when it does not exceed the volume of a pigeon's egg or an almond may sometimes be readily detected, especially in lean subjects, after thorough evacuation of the bowels, by firmly grasping the lumbar region, immediately below the last rib, with the fingers of one hand resting upon the anterior border of the erector muscle of the spine and making counter-pressure with the thumb, while the fingers of the other hand are passed up and down over the intermediate surface in front. In this way it is very difficult for any hard substance, irregularity of surface or distension from fluid to escape discovery. The patient during the examination, should lie on his back with the limbs well flexed to relax the abdominal muscles; chloroform being given if there is much pain or nervous agitation. The above plan of examining for the stone did not in this case reveal the slightest abnormality and there was but little pain experienced when quite firm pressure was applied over the kidney. I secured all the water he had passed during the previous twelve hours and subjected the same to an analysis, which I will here append. (Urine was of deep red color.) Specific gravity 1.028, of slight acid reaction, blood and albumen was found in small quantities, and a large amount of phosphates and pus a trace. A thorough and careful microscopical examination was made and an abundance of mucus corpuscles was found; some pus, but this was slight, however, there was a large quantity of

¹ Gross' Surgery, vol. 2, pp. 709-10.

small celled epithelium, (round cells to a large extent), these evidently came from the pelvis of the kidney; no tube casts could be discovered. I therefore hoped that the irritation had not extended into the secretory structure of the kidney proper, but was confined to the pelvis of this organ.

With the knowledge gained by the analysis and the microscope came the pertinent question, What shall I do for my patient? All of the best surgical authorities agree that renal calculi are generally composed of uric acid or oxalate of lime, most commonly the former; they also agree that when the concretion is an oxalate it is usually solitary.

Dr. Harlan N. Orton reported² a case of uric acid calculus which appeared to have been dissolved in the pelvis of the kidney by alkaline remedies. I had but little hope to accomplish disintegration of the calculus in this case, for he had taken alkaline remedies for precisely this purpose for months at a time.

Professor W. T. Belfield advises³ the ingestion of large quantities of alkaline water. I quote from his admirable paper "Water under the Microscope." In pyelitis, from whatever cause, the ingestion of such water is an absolute essential in treatment, for there is a tendency to the accumulation of catarrhal products in the pelvis of the kidney, sometimes even causing such obstruction to the escape of the urine as to induce hydronephrosis. Another tendency to be prevented is that toward the precipitation of urinary constituents upon the inflamed mucous membrane as well as upon the clumps of pus retained in the pelvis. Both of these objects of treatment—the removal of the products of the inflammation and the prevention of the precipitation of salts in the pelvis—are attained by the administration of an abundance of pure water and in no other way. By securing these results we also secure the so-called

² Chicago Medical Journal and Examiner, Oct., 1884.

³ Water under the Microscope.

“soothing” effect of the water, which is really soothing only in a negative sense; the positive benefit consists in the removal of the irritating products. In pyelitis caused by the presence of renal calculi—a frequent form—a pure alkaline water affords the only hope of a radical cure by medical means. Calculi have been disintegrated and even dissolved by the copious ingestion of simple rain water, and the same effects can be achieved in less time by the use of a water which, while not loaded with mineral constituents, contains nevertheless, a sufficient quantity of the proper ingredients to give it an alkaline reaction, for renal calculi are usually composed of uric acid and urates, whose solution is favored by alkalis.

Agnew advises⁴ opiates hypodermically or by the bowel, either as enemas or as suppositories in combination with the extract of belladonna and when the paroxysms of pain are exceedingly severe, great relief may be obtained from inhalations of ether. In order that the concretion may be hurried through the ureter more rapidly than would be effected by the peristalsis of the muscular walls, it has been advised to administer largely diuretic remedies in order to excite a free secretion of urine which presses against the obstruction from behind. He says further, that it is quite proper to administer alkaline drinks as solutions of citrate or bicarbonate of potash, but their administration should only be to the extent of moderately stimulating the action of the kidneys, so that the *vis a tergo* should be exerted within the limit of safety; kneading has also been practised; an experiment, to say the least, of doubtful propriety. A fixed position of the body and limbs, by removing the tension of the ureter is favorable to the progress of the stone.

May 13, 5 P.M., twenty-four hours since commencement of attack, I was called to administer morphia hypodermically. I found the patient very weak and

⁴ Agnew's Surgery, vol. 2, p. 706.

his temperature 100 F., pulse 120, respiration 20; his suffering was very great, and he would frequently exclaim: "Oh, father, I wish I could die! I wish my suffering would end; how many more long years must I suffer?"

I had now mapped out a line of treatment and was determined to follow it up thoroughly and faithfully; if I failed I would always have the pleasant satisfaction of knowing I did my best and that too in the light of our present knowledge. All previous attempts to give permanent relief had proven singularly unsuccessful, and show to some extent the utter insufficiency of all human effort, no matter how earnestly or arduously the attending physician applied himself to the inexplicable difficulties; in this case, at best, his efforts were only palliative. I directed patient to drink Waukesha water in as large quantities as he wished and as often as he could, this would quench the thirst, which was constant, acquainting him with the object in view and the diuretic influence of the water. I then wrote for the following:

R. Tincture digitalis.....	ʒss.
Fluid extract hydrangea.....	ʒij.
Elixir calisaya q. s. ad.....	ʒiv.
One teaspoonful every five hours.	

This was given for its direct effect upon the kidneys and would be soothing to the mucous membrane; advised a milk diet and one-half drachm of Carlsbad sprudel salt in a glass of water before each breakfast to correct constipation.

In order to facilitate the washing-out process to the greatest possible degree, it occurred to me that I should relax the system as much as possible; anodynes were pushed to the fullest extent; hypodermic injections of morphia and atropia given every two hours; large and hot poultices were applied and made to encircle the body about the loins and frequently changed. This treatment, together with the

ingestion of large quantities of water, was continued the entire night; the patient directed to lie upon the right side as much as possible with the limbs flexed. At 7 o'clock the following morning, forty-eight hours from onset of attack, the father came to my office with message from patient, "Tell the doctor that I am free from all pain but so weak that I cannot pass my water." I advised the father to have his son make patient trials, and if he failed I would relieve him immediately.

8 A.M.—Temperature 100 F., respiration 18, pulse 90, free from all pain, had passed a large quantity of urine of a dark red color, and with it a calculus which is oval in shape, with numerous little nodules, or hard beadlike elevations which are composed of uric acid. The weight of the calculus was 14 grains. An analysis was made and the calculus found to be composed principally of the oxalate of lime with a small admixture of phosphates; this was but a trace.

My patient, while trying to express his gratitude for services rendered him, made this remark: "I felt a gurgling sensation in my left kidney and in the region of the greatest pain, and with this sensation all my pain ceased and (like Dr. Orton's patient said) he could distinctly feel the stone when it dropped into the bladder."

Patient continued with the Carlsbad sprudel salt before each breakfast, also with the digitalis, hydrangea and calisaya four times a day before the meals; a milk diet and as much of the Arcadian mineral water as he wished; his urine soon commenced to clear up and all kidney troubles ceased. He has had no recurrence since last attack and is now quite robust and strong, at the present time, seventeen months since last attack.

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