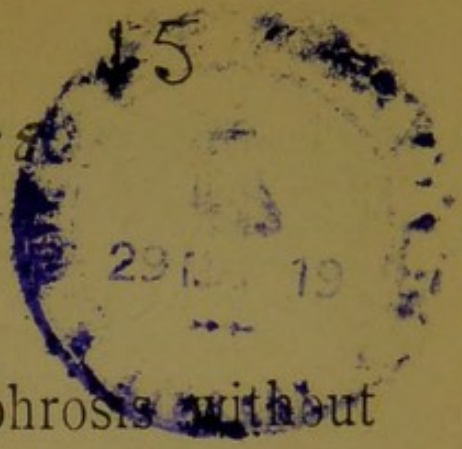
Painless calculous pyonephrosis without fever : nephrectomy, recovery / by Alban Doran.



Painless Calculous Pyonephrosis without Fever: Nephrectomy: Recovery.

By ALBAN DORAN, F.R.C.S.,

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PAINLESS calculous pyonephrosis is by no means unknown. Still I find that we are too often induced, when making a diagnosis in a case of painless enlarged kidney, to exclude calculous pyonephrosis on the ground that that disease must always be more or less painful. For that reason I bring forward this case, also remarkable for the absence of any distinct history of fever, although there was much suppuration. I should like to hear the experience of others concerning absence of pain and fever in kidney disease of this type.

A woman, aged 38, was admitted into the Samaritan Hospital early this autumn under the care of Dr. Amand Routh, who diagnosed an enlargement of the right kidney of uncertain nature, and transferred her to me for surgical treatment. She had been married for fifteen years, and had borne eight children; the youngest was 5½ years old. The patient informed me that she had been under treatment some months ago for disease of the womb, but had noticed a swelling in the right side for a year. Whenever she put on her corset she felt much nausea, and the swelling in the right side ached a little. After swallowing food epigastric pain and nausea followed, but when undressed she was always comfortable. She had never passed blood in the urine, and never suffered from symptoms of renal colic; nor could she remember any feverishness or rigors. She had been subject for three

or four years to a cold numb feeling in the right arm and fingers; it lasted for several hours, and made the fingers look dead; the feeling ran down the right side, and both feet felt cold. For the last twelve months these attacks came on every day.

I could not get a complete history of the case till some time after the operation, when her former attendant, Dr. Aurelius Maybury, of Portsmouth, kindly sent me some notes. He reported that some years ago he treated the patient's husband for double stricture, cystitis, and, he believed, greatly dilated ureter on the right side. Catheterism was still necessary, and pus always came away with the first drops. A few months before my patient entered the hospital Dr. Maybury treated her for copious muco-purulent discharge from the uterus, which was greatly enlarged. After appropriate treatment this morbid condition disappeared—in fact, I could detect no trace of pelvic disease.

The patient was fairly nourished, cheerful, and quite free from pain except when dressed. The abdominal walls were thin; a large movable kidney lay in the right flank, and could be pushed forwards to midway between the mammary and the middle line. Its surface was bilobulated; fluctuation was obscure. It was not tender.

For a week before operation the temperature never exceeded 98·4 degrees. Menstruation was perfectly regular. The pulse was 84, small and regular. In eight days the urine ranged from 24 to 36 ounces in twenty-four hours, specific gravity 1019 to 1026, colour medium yellow, and clear, except on one day when it was turbid, and on that occasion alone was there a trace of albumen.

I operated with the assistance of Mr. Butler-Smythe, and made a Langenbuch's incision on the right side, exposing the kidney. The liver and gall bladder were healthy. I passed my hand deeply into the abdomen till I could feel the left kidney, slightly enlarged, but of normal consistence and perfectly regular outline.

The right kidney, evidently a cyst, was extracted with the greatest ease after division of the peritoneum external to the colon. The connective tissue and fat were absolutely healthy, and there were no adhesions to the kidney. But the ureter was a thin cord proceeding straight out of the cyst-like kidney, no pelvis being distinguishable. I secured the renal artery and vein and a large supra-renal (?) artery, and divided them. The ureter was

dissected up for an inch, transfixed with a safety-pin, tied, and divided. Thus the kidney was set free. The wound was closed without drainage; the stump of the ureter was fixed in its lower angle.

During the first week the patient had no rise of temperature, and the urine was of low specific gravity, and generally contained albumen. On the twelfth day the temperature rose to 100·4 degrees in the mouth, and remained high for a fortnight, reaching 103·2 degrees on the twenty-second day, the pulse remaining relatively low (84 to 100). The urine ranged from 29 to 40 ounces in twenty-four hours, its specific gravity from 1008 to 1015; there was generally a trace of albumen, and an excess of phosphates. After giving boric acid internally, the patient's condition greatly improved. At first, during the feverish attack, there was slight tenderness in the right loin, and the left kidney was a little swollen but not tender; there was also evidence of cystitis. The end of the ureter fixed in the wound was trimmed away, being sloughy; a small sinus one and a half inches long, but not discharging, lay in its track. There was no constitutional disturbance, sickness, or œdema during the feverishness, the precise nature of which is not certain. The patient did very well after the third week, and left in good condition, passing daily about 40 ounces of clear golden yellow urine of a low specific gravity (1005 to 1012). There was no swelling or tenderness in either loin. Since returning home she has enjoyed very good health.

Contents of the Kidney.—I will first consider the morbid appearances of the removed kidney. It measured over six inches vertically. I laid it open just after the operation, a quantity of greenish-yellow pus escaped, of which half a pint was collected. Mr. Shattock reports it as "pure *pus laudabile.* It solidified on heating in a water-bath, and contained the normal number of fatty leucocytes. There was no trace of tubercle." A small rough calculus could be felt moving about in a loculus, which did not empty; a second was fixed in an adjacent loculus. The kidney was sent to the College of Surgeons.

Description of the Specimen.—I examined the specimen with Mr. Shattock in the museum of the College of Surgeons. The upper part was dilated into an almost unilocular cyst, through complete stricture of the ureter at its origin from the pelvis. Indeed, the ureter was

reduced to a mere shred when I divided it at the operation, and cannot now be detected. On the renal side no trace of the orifice of the ureter could be distinguished. The lowest calyces were separate from the rest of the kidney, obstructed and dilated; one bulged between the two terminal divisions of the renal vessels, separating them to the extent of over two inches. The lowest were blocked by a small rough calculus at the infundibulum, and were dilated into a bilocular cyst holding about three drachms of pus. In another loculus, developed from a third dilated calyx, lay, perfectly loose, a fragment of a mulberry calculus, one-third of an inch in diameter. The connective tissue around the two branches of the renal vessels was much condensed by chronic inflammation. Yet there was no sign of inflammation in the fat and other tissues around the kidney. The kidney has been sewn up, so as to appear as it did at the operation, but it has shrunk considerably, so that its main cavity no longer predominates in size over the smaller dilated calices.

The infection was probably gonococcal and therefore ascending. It was clear that the calculus in the lower calices blocked them, hence their dilatation, distinct from the general distension of the kidney. The calculus blocked them so firmly, that when the pus emptied out of the kidney as it was laid open the lower calices remained full.

The cause of the blockage of the ureter at the pelvis and consequent dilatation of the kidney was not evident. The loose calculus may have formerly obstructed the ureter, and then come loose after the obstruction had been made complete by inflammation and contraction of that duct below the stone.

A similar case where the ureter was completely strictured but stones were found loose is preserved in the pathological series at the College Museum (No. 3,539A). The kidney was removed by Mr. Meredith from a woman, aged 33, and the disease was traced to an accident nearly five years before the operation. There was a clear history of attacks of pain, but as in my own case, hæmaturia had never been observed. In the Museum of St. Bartholomew's Hospital (Series xxviii., No. 2,375A†) is

† "Hydronephrosis of Right Kidney removed by Nephrectomy: Aberrant Renal Artery," *Trans. Path. Soc.*, vol. xlii., p. 185.

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CONSULTATION HOURS:
DAILY, 2.30 TO 3.30 P. M.
TUESDAY AND FRIDAY, 8 TO 11 A. M.
TELEPHONE CONNECTION.

April 20, 1901.

Dear Sir:

I am very glad to have your article on "Painless Calculous Pyonephrosis without Fever, etc". The case is very similar to one of my own. I was interested to see that you adopted the operation by abdominal section. In all of my nephrectomies, except the first, I have operated through the loin, now ten, and all of them made good recoveries. In women it is so comparatively easy to study the urine in the opposite kidney by obtaining the urine separately by means of ureteral catheterization, that the question of the other kidney as a practical matter is much less serious than it formerly was.

Some of the kidneys I have removed have been enormous, requiring an incision reaching almost as far forward as the pubes, curving around the crest of the ileum. In the first case I used the abdominal incision, but am satisfied that in general the posterior extra peritoneal incision is much simpler and better.

Recently I have had two interesting nephrectomies. The first was for a so-called hypernephroma or "strouma lipomatodes aberatae renis". In this case the tumor was larger than a fetal head. The last one was for pyonephrosis, the kidney being so enormous that there was dulness from the nipple line almost to the pelvis. The chest dulness was caused by the enormous kidney displacing the liver upward. Except a solid tumor I cannot conceive a situation which would tax the posterior incision more severely than

this. You will see by this, that being convinced of the advantages of a posterior incision, I am aiming to make proselytes.

Very truly yours,

Charles H. Mayo.

Mr. Alban Doran, F. R. C. S.

a right hydronephrotic kidney which I removed in 1891. In that case there were no calculi, but the ureter apparently became obstructed by adhesion to an aberrant renal artery. These three specimens show that the ureter may be obstructed very completely by adhesive inflammation in the hilum, quite independently of calculi, which may or may not be present. In other words, we are well aware that other agencies besides calculi may obstruct the ureter, whilst it seems possible (as in Mus. R. C. S., Path. Series, No. 3,539A) that an obstructing calculus may fall back into the dilated kidney. Hence, when we discover a loose calculus in a cystic kidney, we cannot always be certain that it was or was not the cause of the obstruction which led to the dilatation of that organ.

There are several clinical and surgical features in this case besides the absence of pain and fever which seem to me to deserve a little consideration :—

(1) It is fortunate that I operated at once, for the suppuration was still confined to the kidney, whilst the fat and connective tissue around remained perfectly healthy. Hence I was enabled to remove the kidney with the greatest ease ; there were no adhesions ; and I enucleated it without tearing or bursting its wall and spilling pus into the peritoneum. Had the operation been deferred because the tumour seemed to be but a floating kidney, inflammation of the surrounding tissues would in all probability have developed at no distant date, greatly increasing the difficulty and danger of any future surgical procedure. I do not deny that the disease might have remained quiescent ; the experience of Bruce Clarke, Murray (of Capetown), and others, have shown how people manage to keep alive with very bad kidneys. In my case, it must be remembered, the kidney was movable, and thus much exposed to injury.

(2) Acting on Mr. Knowsley Thornton's principles, I reached the diseased organ through a Langenbuch's incision, and was thus enabled to gain a fair idea of the state of the opposite kidney. I admit that there was danger, in this instance, of letting pus escape into the peritoneal cavity ; but the abdominal incision enabled me to enucleate the kidney with ease, keeping both aspects in sight during the whole process, and I could clearly distinguish the state of the hilum and ureter at a very early stage of the operation.

(3) This clear view of the kidney and its relations afforded by Langenbuch's incision demonstrated that the diseased kidney could not possibly have exercised its functions for some time, and could hardly ever do so again. As Noble, of Philadelphia,‡ has observed, in reference to a case somewhat like my own, "Previous experience in somewhat similar cases had shown that when the system was relieved of the presence of one suppurating kidney, the other, even though not perfectly normal, did its work better." The ureter, atrophied below the pelvis, did not require Howard Kelly's very radical nephro-ureterectomy, which is not very difficult in a female subject, and is good and thorough surgery when the ureter is extensively diseased.§

The absence of Pain.—It is chiefly because pain was entirely absent in this case, the main subjective symptoms being tenderness and nausea caused by the pressure of stays as in any movable kidney, that I publish this record. Most authors admit that painless pyonephrosis may occur exceptionally, but find that as a rule it is painful. In Morris's tables‖ all the eight cases¶ of pyonephrosis are reported as "painful"; in one (No. 13) the kidney, as in my case, was movable. Here I may note that the clinical history affords explanation why the kidney disease was purulent; it was clearly not a case of a movable kidney becoming first hydronephrotic through obstruction of its ureter due to kinking, and then suppurating. The mobility had little or nothing to do with the disease.

To return to the question of pain, it is generally admitted that a calculus does not cause suffering when impacted; in my case there was both a loose and an impacted calculus. Mr. Bruce Clarke, who perhaps more than any other authority, has brought forward evidence to prove how long extensive kidney disease may be borne, informs me in respect to the present case that he does

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‡ "Report of a Case of Nephrectomy for Pyonephrosis due to Impaction of a Stone in the Ureter, with Remarks on the Importance of the Early Diagnosis and Treatment of Renal Calculi," *Amer. Journ. Obstet.*, vol. xli., 1900.

§ *Operative Gynæcology*, vol. i., p. 428.

‖ *Hunterian Lectures on the Origin and Progress of Renal Surgery, with Special Reference to Stone in the Kidney and Ureter, &c.*, 1898, Table VI., Hydronephrosis and Pyonephrosis.

¶ *Ibid.*, Nos. 2, 3, 6, 8, 13, 14, 15, and 18

not know whether he has observed a case of painless calculous pyonephrosis specially, but painless kidney containing calculus is common enough if the stone be fixed, and painless pyonephrosis without stone is almost the rule in his experience. Surgeons must never forget his remarkable researches in the *post-mortem* room at St. Bartholomew's Hospital from 1874 to 1884. "Twenty-four kidneys containing stones were discovered; eleven of these had well-marked symptoms during life and thirteen had not."* He quotes Dr. Murray's case (Cape-town) where there was double calculous pyonephrosis.† I have looked up the original report, and find that the case was somewhat like mine, but was bilateral, whilst neither ureter was totally obstructed. As for pain, there was not even tenderness. The patient had been weak all through her life. Shortly before her death she suffered from attacks of faintness with fever and diarrhœa. A tumour was detected in the left loin, free from tenderness; it grew bigger and pus was passed freely. Finally, the patient died delirious, after being three months under treatment. Murray's report of the necropsy is summed up in the sentence quoted by Bruce Clarke. The two kidneys "were simply bags of uriniferous pus, very little indeed of gland structure remaining."

Mr. Morris has recently informed me that only last month he operated within a week on two cases of renal calculus, the first intensely painful, the second painless. In the first, where pain was constant, he found a small stone packed away in a recess in an upper calyx. The second case bears striking points of resemblance to my own. The patient was a lady, aged 47, who had never suffered from any pain or local discomfort, beyond aching on the right side at night when she lay on the left side, and this symptom was attributed to rheumatism. For two months before operation she had passed bloody urine almost uninterruptedly. The right kidney was opened. It was riddled with calculi and pus sacculi. Nineteen calculi were removed; but the kidney was simply drained, and the case is doing well. In this instance there was painless calculous pyonephrosis with a

* "The Diagnosis and Treatment of Diseases of the Kidney amenable to Direct Surgical Interference, 1886."

† "A Case of Long-Standing Renal Calculi in both Kidneys," *Lancet*, vol. ii., 1885, p. 614.

distinct urinary symptom; in my case the same condition with no urinary symptom, as the ureter was blocked.

The Absence of Fever.—My patient declared that she had never experienced anything like feverishness or rigors. She had attended to her domestic duties without a day's rest for years—and, as she had six living children, the eldest hardly 14 years old, those duties, I presume, were heavy. We know, however, that in chronic suppuration there may be little rise of temperature, and that even a temperature of 103 or 104 degrees is not inconsistent with little loss of strength and a sensation of uneasiness soon forgotten. I dwell on this symptom—or absence of this symptom—because we are all apt to put down absence of fever or of any history of fever as evidence that, in any kidney case, suppuration is improbable. More often, however, as Morris and Bruce Clarke have already pointed out, we persist in thinking that stone in the kidney is always painful, though we ought to know better. Plenty of cases have been recorded where pain was absent. My own case shows that it may be absent, and that a patient may go about with one kidney converted into a bag of pus, yet appear in excellent health.