

DORSAL INCISION FOR KIDNEY SURGERY*

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In 1896 Simon¹ used the dorsal incision for the first time in kidney surgery. In 1956 Lurz² started to use the dorsal incision, and Gil Vernet³ popularized it in 1965, and since then it has generally been known as the Gil Vernet incision. Winiewski⁴ has removed bilateral kidney stones in one session using this incision.

We first used the dorsal incision for kidney stones in 1967 after attending a urology course by Gil Vernet in Barcelona. Since 1967 we have been using this incision for kidney stones, pyeloplasties and upper ureteral stones, and in 1973 we presented a paper entitled "Dorsal Incision in Bilateral Kidney Stones (6 cases)" at a urology meeting in Istanbul.

The advantages of this incision are:

- a) The kidney need not be mobilized.
- b) The peritonium is on the anterior aspect; for this reason there is no peritoneal irritation, and the patient can be fed easily right after surgery without any bowel problems.
- c) Practically no incisional hernias are encountered.

Material and Methods

Between 1972 and 1984 we operated on a total of 772 cases, 451 males and 321 females. The average hospital stay was four days, and there were no deaths.

Surgical technique. For bilateral stones the patient is in the same position as in herniated disc surgery, i.e. prone position, and the table is flexed. In one-sided cases the patient is placed halfway between the prone and lateral positions. The incision is made from the tip of the 12th rib to the iliac crest almost parallel to the spine. The incision is carried to the posterior aspect of the lumbodorsal fascia. After opening the fascia a Finechiotti self-retaining retractor is placed. After opening the

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Gerota's fascia, the kidney pelvis and upper ureter are in full view. It is not necessary to mobilize the kidney.

In a very few of our cases, in order to remove the kidney we had to extend the incision anteriorly from the lower part. Some patients subsequently complained of numbness in the inguinal area on the operative side; however, they required little analgesia.

Summary

In 1967 we started using the dorsal (Simon) incision for bilateral kidney stones. Between 1972 and 1984 we operated on 451 males and 321 females a total of 772 patients, for kidney and ureteral stones and pyeloplasties, using a dorsal incision. With this incision we did not encounter any postoperative incisional hernia, and the average hospital stay was 4 days.

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DISCUSSION

Barlas: Do you use the rigid ureterscope? We find it difficult, sometimes, to pass a catheter.

Wickham: I think it would depend on the dilatation. I think in very obese people and in cases of microureters as it were, it might be very difficult. We've done about 65. You've got to spend a lot of time really; you can't do these things as a rush job. I think in the States they were saying they set aside three hours for each one which I think is a bit excessive, but I've certainly been up to 2 hours.

Barlas: Did you have any cases with severe bleeding so that you had to open the case?

Wickham: We had the one lady where we had to take out the kidney. We had two other cases where we had to transfuse; I think one patient had 12 units of blood and one had 8 units. But we didn't have to interfere and apply surgical procedures. We had again about 20 patients who had about 2 units transfused, but normally we don't transfuse at all.

Khalifa: Do you usually pass a ureteral catheter before percutaneous procedure?

Wickham: If we're going to fragment we pass a catheter. If we're going to do a straight removal of, say, a half-centimeter stone, we don't; not unless we're going to use the ultrasonic electrohydraulic.

Vatandaşlar: I have a question about renal blood flow after the operation and before percutaneous procedure starts; have you done any comparative study concerning the percutaneous approach to kidney stones and open surgery?

Wickham: Yes, we did the first thirty very carefully including pre- and post-operative clearances and pre- and post-operative renograms and we got no differences in function at all.

Hargreave: Who makes your metal ureteric dilating canules?

Wickham: Those are done by Storz. Wolf now produces a plastic set which I think are a little better.

Smith: How many cases a day do you think you, or whoever is running the stone machine, will be able to do?

Wickham: Well, the Germans can do 5 cases in a session, in the morning or the afternoon. Some units are doing up to 10 cases a day.

Erözenci: How long does the whole procedure last, say for a medium-sized stone?

Whitaker: On the Dornier or percutaneously?

Erözenci: Percutaneously.

Wickham: Well, if we have a good run I think the quickest Michael and I have done "from skin to skin" as it were was 35 minutes, but usually about an hour for an average size stone.

Whitaker: Is there any limit to the size of stone you can get down the ureter? I mean do you assume that if it's big enough to get into the ureter you can get it out below? Second, can you use the ultrasound up the ureteric cavity?

Wickham: Yes, well I should have mentioned that. I use the electrohydraulic. You can pass that up, break up the stones, and try to take the bits out or let them pass them. The bigger stones, say 1 cm across and about 3 inches down the ureter, we tend to push back up and then puncture and take them out. I think that there's no stone that is not amenable to the endoscopic approach now.

Harmankaya: You are using isotonic solution. Have you encountered any serious infections after the operation?

Wickham: Infection has not been a problem. We've had one case of septicemia which settled down in about 12 hours with antibiotics. A colleague used to use glycine for perfusion and he got two nasty TUR reactions. After he changed over to

saline, which is what we've always used, there were no such problems. I have produced a number of spectacular extravasations. Early on I produced one which blew the patient up enormously. I thought, Oh my God, this is the end of the procedure. Within 6 hours it had all gone. The patient was sitting up having tea, so I didn't worry then about extravasations. Occasionally the renal pelvis gets punctured when you're doing the ultrasound. I've seen that happen.

Khalifa: Thank you very much.. I assure you that for the coming 25 years in our part of the world this will not be available because of technical problems, not the price. We have the ultrasonic bladder lithotrite. Unfortunately we used it four times and we don't have anybody to repair it. For the last five years it's just in storage.

Wickham: All I can say to that is, quote a colleague who proudly says he's done 600 I think, in Germany now, and he's had one probe since he started.

Hassan: Any colic after the procedure?

Wickham: Occasionally we get colic. Very few cases of it actually, but after the Dornier about 30% of them get colic.

Tellaloğlu: What do you think of the long term complications of the procedure, 5 years later on...?

Wickham: Which one are we talking about, the percutaneous or the Dornier? With the Dornier, the message is, you see, that you can put them back on the machine. John knows, I was absolutely fanatical about getting all the bits of stone out of a kidney. Now, people are so much more relaxed. They say "Well if we don't quite clear the kidney we can always put them back, in two years' time, and have another go".

Tellaloğlu: Not the stones, I mean. The tissue. The kidney itself.

Wickham: Well, these studies go back 10 or 12 years to the time when Eisenberger started those dog studies on the extracorporeal lithotriptor in Munich; and they've had function studies on the kidney, histological, and there have been no problems. And they've got follow-up now of 4-5 years on the Munich lithotriptor and in some cases there has actually been an improvement in renal function.

Tellaloğlu: Don't they have hematoma following the procedure?

Wickham: You sometimes can get a perirenal hematoma. You get a fair degree of hematuria in the extracorporeal lithotriptor, which usually is about as much as you get from the percutaneous. It clears up in a couple days.

Hassan: What about complications?

Wickham: I don't think there have been any human problems, but in the dogs I remember Eisenberger showing us you could shatter ribs quite nicely and you can shatter the lung too.

Blandy: And you can stop the heart, can't you?

Wickham: Yes they had one death. This was a man who'd had four coronaries previously but you can get an extra systole with the shock wave, so they've now triggered the shock wave with the p-wave of the electrocardiogram so that you avoid that, and they've had no more trouble.

Harmankaya: Is there any migration of the fragments of stone?

Wickham: Well, this we've found with the ultrasound. Yes.

Harmankaya: So what do you do?

Wickham: Well again, Michael Bargrove has done quite a lot of animal work on this, demonstrating that if you've got penetration, within a week most is washed away and that there's very little residual; even at six months, you know, they can barely find any. It worried us when we were doing clinical ultrasound because there was this dust which sort of stuck to mucosa and wouldn't wash off initially. We were worried that this would be a big feature of stone recurrence. It hasn't been.

Blandy: Well, I think there is plenty of dust even when you do an open operation.

Wickham: Yes, I'm sure there is.

Sade: Is hydronephrosis advantageous or disadvantageous to this procedure?

Wickham: You want a moderate degree of hydrophosis for ease. If you've got a big kidney, you're chasing bits everywhere and they speed off into the upper calyx, and it makes life difficult.

Blandy: I would like to make the point that the percutaneous procedure is a very difficult operation.

Wickham: You must have a good radiologist with you.

Blandy: Don't you think it would be fair to say that you have had immense experience? I think for people who are going to start they've got to be prepared to start slowly.

Wickham: I would think, I think I'm being honest in this, that it is no worse than learning how to do transurethral resection. And then, you must admit you have quite a few complications when you're learning don't you?

Blandy: Indeed, that's why I think it's important everyone should be prepared to learn properly and slowly.

Wickham: That's why I emphasized today that there is a learning curve in this business, we only got a 60% success rate at the start.

Dajani: You said that people ought to start with two-stage procedures, work on smaller stones, until they gain experience.

Wickham: Yes, that's right. I know I don't do the puncture dilatation myself, but I'm quite sure that as a surgeon, I could do it. It is just convenient to have someone to help you.

Blandy: The other thing is, you do need really rather good equipment and you must be prepared to lock-up the X-ray department for a considerable amount of time, and in a busy unit there are always problems.

Wickham: We all use ordinary screening equipment, I mean there's nothing special about that.

Blandy: That's not the point. You're not in competition with 255 gynecologists, orthopods and everybody else.

Wickham: That's right.

Blandy: My feeling is that, when the big banger or the Japanese cheap version of the big banger, is available to everybody, the logical thing to do would be to put it in a few, well-selected centers.

Wickham: Yes, I agree I'm sure this is what is going to happen. We shall get Stone Centers.

Blandy: One in Kuwait or somewhere.

Hassan: Don't you think It's a mistake to generalize? Even with this percutaneous procedure it should be for selected cases? For example, in the case of a big stone in the pelvis, wouldn't it be much easier to do an open operation and take it out?

Wickham: Which would you rather have, if it were your stone?

Hassan: I'd rather have the open operation.

Blandy: I've sent several of my patients to Mr. Wickham and I have to say they've been extremely happy and satisfied.

Wickham: You've only to talk to patients who've had a conventional operation and then a percutaneous, and they say that there's absolutely no comparison at all. Also, remember, there's such a thing as patient pressure. And with regard to this, I think the urologist particularly must be expert in ureterolithotomy. I find it more fiddling than doing the kidney but I'm sure any urologist should be able to do this because, I think we've all seen more ureteric stones than kidney stones.

Türkyılmaz: I agree. And as urologists, as opposed to the general surgeon, I think we really have to learn endoscopic surgery, like TUR it is central to our work. It's interesting how patients are putting pressure on the surgeon or the urologist, to get these things out, without cutting. It's surprising how many patients we have, who read about these things in the newspapers and journals and magazines, and put pressure on us to do the same. But for a country like

Turkey — a developing country — there are all sorts of technical difficulties, problems of equipment and servicing.

Wickham: But you can't disinvent the steam engine can you? It's happened.

Türkyılmaz: True. So we must start, in one way or another, to learn these things and establish a working relationship with the manufacturers.

Blandy: I think I'm right in saying, John, you didn't make it clear, you don't operate symptomless stones, do you? You only operate ones which you would otherwise do something for? Is that right?

Wickham: Yes. The only symptomless stones which we've done, which amount to about half-a-dozen, are in airline pilots or RAF aircrew, where they have a spot of calcium on their plain X-ray and you check. They can't fly unless you get it out. And we've done, as I say, about half-a-dozen of those.

Blandy: What is the situation in Scotland, Jeff? How many of these have you done?

Chisholm: About sixty have been done in Edinburgh now.

Blandy: Can I rephrase that question? It's being done in Edinburgh, by one unit?

Chisholm: By one man.

Blandy: Do you think that's the right way to do it in Edinburgh?

Chisholm: Right as a start.

Blandy: In my hospital, I volunteered one of my brighter, younger colleagues, to do it.

Wickham: I think, inevitably, we're going to have to go in for Stone Centers; nobody's going to be able to afford Dornier lithotriptors all over the place; and I think in England, we shall wind up with 5 or 6, and I imagine in Turkey, in time, you'll have probably the same number, and the patients can go to Stone Centers.

Blandy: May I ask you, are you, at the moment, using electrical discharge to shatter the stags, or are you operating on the stags?

Wickham: I'm still operating on the stags, because it's not time consistent to do them percutaneously, but you can do them that way. We wouldn't probably do a pelvic and a lower caliceal of stag, you know the sort of lower half of a stag, percutaneously; if you've got to start fiddling round with all the other cases it's just too fiddly so I'm still doing the occasional open operation.

Blandy: And if they've got an associated PUJ then you put in the optical urethrotome.

Wickham: That's right. We put in the optical urethrotome and just incise the PU junction.

Hussien: We know that the narrowness of the PU junction is due to many causes.

Wickham: That's right.

Hussien: Is treatment the same, irrespective of cause?

Wickham: Yes.

Blandy: How many times have you cut the lower pole segmental artery?

Wickham: Not yet, John. But you can see it constantly, you see.

Blandy: How many have you done, and what's the follow-up like?

Wickham: We have done, I think, about 32 in the last two years. The follow-up's pretty good. More than two-thirds of them are doing well.