

Introduction of percutaneous nephrolithotomy in Hungary in 1984

Csaba Tóth*

University Debrecen, Hungary

*Corresponding author:

Csaba Tóth,

University Debrecen, Hungary,

E-mail: cstoth@med.unideb.hu

Received Date: 17 May 2023

Accepted date: 03 June 2023

Published Date: 08 June 2023

I received the letter from Professor Mauermayer by return of post from Munich. I had travelled to wherever I had lean the chance to get a glimpse of different workshops whether in my own country, Europe, or even in America. In the summer of 1984, I showed up at the Clinic of Urology of Klinikum Rechts der Isaar. Looking for the famous professor, I introduced myself at the secretariat, clutching the letter. I had hardly finished my sentence when, before the secretary had said anything, a man with a slight stoop and wonderful radiance rose from the height of the lower shelf. Welcome, dear colleague, so glad you've arrived! You know you're going to be the last person I can show something about our profession as I am retiring as of next month. Thank you for your interest!

I could change my clothes without any disingenuousness as his deputy offered to share his locker with me, and off we went into the operating theatre.

Some of the answers that I gave revealed that I wasn't a complete beginner; I had been practicing as a surgeon and urologist for exactly 20 years. After my study trips in Hungary I had been practicing transurethral prostate resection procedures for years; however, despite the many surgeries that I have performed, I feel that there is room for improvement. There's no way I'm going to pass up this extraordinary chance to learn ideas and movements from the man who was the author of the best book of the time „Transurethrale Operationen”.

I observed 3 or 4 surgeries per day; I kept asking questions and they tirelessly and selflessly explained and showed what, why, and how they did their work. In the afternoons I could study typical and atypical solutions on videos. I watched an entire series of didactic films from beginning to end. It was thrilling to observe the interventions the following day, and discover the refined techniques in them. It was not only the professor whose surgeries I observed; I saw an absolute beginner, pale, ankle-deep in the bloody rinsing wash, and there was no end in sight to the surgery.

As I don't drink coffee, don't smoke or waste time chatting, between two transurethral surgeries I could witness the following scene in the operating theatre next door: with great joy one of the doctors had just removed a metal tube from the side of a young woman lying in the prone position, with a kidney stone attached to its end. Turned back on her back, the patient smiled as she was being wheeled out of the operating theater.

Well, at this point the world turned upside down for me. I had some indescribable but also inarticulate feeling ran through me. It was something similar to what I was overwhelmed by when, at the age of 16, after my appendectomy, I had the old scrub nurse take me to the room where I had been rid of my sufferings, the room I have honored as a shrine ever since. All of a sudden the memory of my first kidney surgery ran through me during which I mentioned it to my senior assistant how terrible it was that such a huge cut needs to be made in the patient's side to remove a little kidney stone. And this is how it is done throughout the world. Here, however, something gripped me. This method had been meant for me. And I was meant to realize it. I could sense that I was witnessing a miracle which I, too, was going to perform and introduce back home. Not for a moment did it occur to me that there could be some who would not like it. In addition to the transurethral surgeries, I spent my days at the clinic in the endoscopy unit. In the course of the surgeries I suddenly remembered that I had come across this endoscopy surgery in the columns of *Der Urologe* a couple of months before, but at the time I just turned the page, thinking that it was impossible to introduce this minimally invasive technique requiring special technical equipment in my country anyway. Now, however, there appeared to be something of a flicker of hope before me.

One particular percutaneous nephrolithotomy was followed by a huge celebration. This was the one hundredth surgery of this kind at the clinic. It was performed by Doctors *Pfab* and *Vogel*. I shared in their joy. I sensed that an era had come to an end, the *Bergmann-Israël* surgeries involving exploration, cutting the patient in half had come to an end, and the patients will be relieved of huge burdens. This was just a cm-long incision in the skin, a day or two's hospital stay, fast recovery with full working capacity. A kidney operated on using exploration can undergo this procedure maximum twice or three times at best in rare cases; after that it needs to be removed. The situation is even more desperate if it involves double kidney stones or stones developed during childhood. The importance of this surgery can hardly be expressed. Percutaneous nephrolithotomy could save them. You can have nothing but praise for the pioneering work of doctors P. Alken, and J. E. A. Wickham.

The following day something was already pressing me to ask the surgeon about the makes and specifications of the equipment that they were

Annals of Clinical and Medical Case Reports

working with. He looked surprised, and his reply sounded honest: that I don't know; we were given these pieces of equipment to practice with, the rest is the responsibility of the economics department. Well, I became none the wiser but refused to give up. After the last operation of the day I struck up conversation with the scrub nurse, who was very polite but rather uninformative with me. Well, this didn't propel me any further in my quest, I thought. The next, day, however, she handed me a long list of names, code numbers and catalogue numbers of the equipment: there were diverse variations for any one piece of the equipment to be used for one function. Now that's what I call precision – but what good is it to me? Only a fraction of the equipment listed was used in the interventions that I witnessed. Then I thought of something new: while observing further surgeries I took notes on what equipment the surgeons were using and in what order. I had given the pieces of equipment names and tallied them, which revealed which pieces were used most frequently. I came up with a usable list.

One afternoon, while I was watching video films, I doctor came up to me. Little did he know that I was going to direct a barrage of professional questions at him; still, he answered my questions politely. To my utter surprise, he turned to me, asking „Haven't we met somewhere before?” We began to search for information in each other's lives. A good ten years before he was working in Jena while I was working in Szentes. In 1974, I travelled to Halle on a scholarship, one week of which I spent in Jena. Professor Rockstroh introduced me to Doctor Schneider, who even put me up in his own flat in Jena. I learnt an awful lot at both clinics. That was where I studied the importance of kidney stone analysis and care of patients suffering from kidney stones based on this. Back in Hungary nobody was doing this at the time although Mihály Berényi and Éva Szabó were well known in the field of kidney stone research. After the few months spent at Halle and Jena several of us returned to the Jenaer Harnsteinsymposia for years. I myself gave several lectures. The week I spent at Jena and my regular later attendance at the symposia had obviously left a vague mark in Doctor Vogel's memory. Talking in Munich now, he said that I reminded him very much of a Hungarian doctor he may have seen somewhere before. Yes, it was me. I apologized profusely for not remembering our previous encounter. He was not in the least surprised as his appearance had changed completely while he was in prison. He started to speak.

He was living and working in Jena but felt an urge to move west. He was dragged off the Berlin Wall by border guards; that's how he ended up in prison. He came really close to being shot to death. His hair fell out and his facial features became haggard. His uncle, who was living in Germany, spent a huge amount of money to bail him out of the cell and East Germany. Now he is working at this Munich clinic. He was one of the people in charge of the percutaneous technique. We talked and talked for hours.

The two weeks flew quickly by and the time came for me to thank Professor Mauermayer and say good-bye to him. I have not seen him since, nor have I heard about him. However, his impressive personality

left a deep mark in my soul.

At the hospital in Szentes I had learned surgery and urology from Professor István Bugyi; I also practiced these fields there. He was still alive when, in 1980, I earned my academic candidate of sciences degree (it was a rare occurrence in provincial hospitals). Later I established a 25-bed independent urology department, of which I became Chief Physician (having been head of the section since 1975). When I returned from my study trip in Munich, two of my colleagues, Imre Hódi and Endre Holman showed great interest in and listened tirelessly to my accounts that went on for days. They also reflected endless enthusiasm, which I had obviously passed on to them. The next Austro-Hungarian scientific meeting on urology was organized in Győr a couple of weeks later. On one of the posters in the corridor I caught sight of the equipment that I had observed in use in Munich. My eyes lit up. The solution was within arm's reach. In theory, I could take it home with me, and start performing percutaneous nephrolithotomies as early as tomorrow; I could immediately introduce this minimally invasive technique in Hungary. This momentary reverie felt just like a children's tale – however, I had an odyssey ahead of me before I could realize all that.

At the banquet of the Győr meeting an event took place that could not have been staged beforehand. At a remote table a nice doctor was sitting, surrounded by many people; there was a vivid conversation going on. All of a sudden the man at the centre of the celebration stood up, walked around, and then came up to me. We have met before, my name is Pali Vadon. I live in Graz and have been working under Professor Lipsky for several years now in Loeben. I had worked at the Pécs Clinic of Urology before I moved to Austria. I have come over to you now to tell you a story that involves you, and for which I have great respect for you. As it happened, during a surgery the surgeon said that somebody should dip into the rectum and remove the prostate. This was normally the task of the youngest doctor or perhaps the scrub nurse. But no one moved, at which point you put on your gloves and crouched under the isolation site in between the patient's legs and removed it from the rectum. Everyone in the room knew that you had been a surgeon specialist for years and had performed more surgeries than all of those present combined, and you still undertook to dip into the rectum. It was at that point that you caught my attention and decided then and there to follow your career although I am much younger than you. Now I'm in a position to help you as a token of my appreciation. The unexpected offer baffled me, but I did not bask in my surprise too long; instead, I began to concretize things. Listen dear Pali, I'll get currency, you'll buy the percutaneous equipment for me and when you travel next time, you'll bring it into the country.

The planning gained momentum. He introduced me to his superior, Professor Herbert Lipsky, and immediately scheduled a scientific meeting in Szentes which they would hold on percutaneous nephrolithotomy and the treatment of prostate cancer. We settled the date and everybody did what they were supposed to do. They prepared for their lectures while I was making plans to acquire the equipment. Everything got off to a flying start; our new friendship was topped off with happy planning.

Annals of Clinical and Medical Case Reports

Csongrád is a town not far from Szentes, where good wine is made from the fine grapes of the sandy banks of the river Tisza. I learned that one of the plots was tended by a pair of brothers; they were living in West Germany but returned to Hungary regularly to grow grapes. I need German marks, have you got any? You'll have them next week. But I need a lot. No problem. I sold my car in a jiffy and got enough money in Hungarian forints to cover the expenses of the equipment, and everything was going as agreed, except that I asked the brothers to get the money to a specified address. A couple of days later Pali notified me saying that he had the money and, after another few days, that he had the equipment. I was overwhelmed with joy.

The day of the scientific meeting in Szentes came. Telephone: everything is OK. They failed to arrive at the expected time that evening. The audience waited patiently. All they were aware of was the scheduled lecture, nothing else. I, however, kept looking at my watch with growing impatience as I knew that both the Austrian Professor and my friend Pali were punctual people. (There were no mobile phones at the time!) It was already dark when they finally arrived. I looked at the car to check if they'd been involved in an accident, but there was no indication of that. So they arrived - but, without the equipment. Come on, stop fooling around, this can't be happening! But when Herbert kept repeating the negative truth, I began to believe it and became really sad. They told us that they were late because the Austrian border customs had not allowed the expensive equipment to pass through customs, so Pali walked back to the nearest inn with the fine boxes and valuable content. Two days later, after the otherwise rich and pleasant time we had spent together, they picked up the equipment that the inn had saved for them. Man proposes, God disposes. Who knows in advance what awaits us? It's a good thing if we find out afterwards that nothing ever is what we want it to be; we can only do the implementing.

One day, using a Dormia basket, I removed a stone from the ureter of a man who was suffering from cramps. As soon as the stone was recovered, I mentioned to my assistant that if this technique hadn't worked, we would've had to cut his side open, when in fact the Germans already have a method that allows the removal of stones from the kidney through a small hole. The patient overheard this and was appalled.

The next day he began to talk to me. What did you tell your assistant about yesterday after my stone removal? A stone, through a small hole? There's no huge cut? And the patient can return to work soon? And it can be performed multiple times over the years without damage to the kidney? Did I hear all this correctly or was I imagining things in fright, as a result of my sedative injection? I assured him that he had, in fact, heard everything correctly. He was brimming with a certain willingness to help, but who is he to interfere? Our conversation unfolded. It turned out that he was the party secretary of a large factory and chairman of the tennis section in the town of Csongrád. We'll go together to fetch the equipment, he said. Come on, how can you even think that? As I have told you, I have been to Germany earlier this year, where I learnt the procedure; I can't travel to a western country any more times this year. Well, this is exactly where I

can be of help. I know that you, too, play tennis in Szentes. We'll organize a tennis tournament with the participation of players from Csongrád, Szentes, and Graz. As leaders of a sports club we can travel to Graz to discuss the details. As soon as recovered from the stone removal, we were on our way to the passport department of the county seat. We crossed the Austrian border on November 6. That night we slept in Leoben, with the equipment under my bed. I was as excitable as a child. The next day was November 7. In Hungary this was the commemoration day of the Great October Socialist Revolution, a bank holiday. Whoever could headed for Austria on shopping sprees. There were hardly any people returning to Hungary from Austria in the morning hours except us. We unpacked the fine boxes of equipment and neatly mixed the pieces with the tools of the otherwise totally empty car and had an easy border crossing. The customs officials were looking at us in disbelief. In my utter joy I was slapping my friend Pista's knees; we've been fast friends ever since.

The next day, fuelled by joy, I hurried to the hospital director and told him the story. We can now start a landmark activity in the treatment of kidney stones. Sadly, this is not the case, his answer came. You can't work with privately-owned equipment in a state-owned hospital. Now what are we going to do? There's a solution. Sell the entire set to the hospital and we can begin work. However, apparently, the hospital can't buy anything directly from a private individual. First things first: sell the set of equipment to OMKER Commission Shop in Budapest, where the hospital can buy it. I rushed to the said Commission Shop in Budapest, where I met a really seasoned appraiser. Acting like a naive child, I told him about my plans. I had a slight anxiety come over me to see that he was gazing hard before him and did not move for minutes. My anxiety began to ease when he finally looked at me over his glasses. I seemed to recognize something of a sly smile in his eyes. And what would be the price of this, he asked, but something told me he knew more than I did. I don't know. Oh, but I do, he said enigmatically. It costs so much that I can't take it off you in one sum. At this point I was about to relax but couldn't entirely as his next request to me was to produce the customs documents. Oops! I had certainly not expected that! I need to go back to Szentes.

The next ordeal happened at the Customs authorities. I explained my intentions, they examined the equipment and I explained what it was used for. Everything will be all right except that I should obtain a certificate to certify that this equipment was suitable for carrying out surgeries on humans with them. I obtained the address of the office that had issued the license; naturally, like everything else, this, too, was in Budapest, and I showed up there at the agreed time. They looked here, ran there, put their heads together, leafed through a catalogue, and finally issued their license. Back to the Customs Office. They imposed some tax on the equipment, which I paid by check only to have to go back to Budapest to the Commission Shop. My hospital director let me have the hospital seal with me so that I could buy half the set as soon as half of its price was paid for. Upon arrival home I received a telephone call, of course, from Budapest, with the following content: I hear you've sold some percutaneous equipment to The Commission Shop. Tell me, old chum; is it in a good condition? Because I'm interested. Surprised, I smiled and

Annals of Clinical and Medical Case Reports

answered, our hospital has already purchased it. We paid for the second half in a couple of days' time.

How much time, money, how much trouble have I invested in this so far? – I have never kept count. The desire and hope to improve things kept driving me and I finally carried out the task that I had been dealt. And there was still no end in sight.

We began our percutaneous nephrolithotomies on November 13, 1984 - first in Hungary and all the countries of the so-called Eastern Block. Its news spread like wildfire across the entire country. The TV News was the first to cover the groundbreaking event.

Next May I received a phone call. This is Vogel from Munich. I am arriving at Ferihegy tomorrow and I'd like you to meet me driving a big car. That's it, plus the exact time of arrival. Well, what was this supposed to be? I didn't understand, I regarded the reference to the big car as a piece of humor but was definitely pleased that he was coming. On seeing the huge boxes at the airport, I realized this was no joke. The boxes wouldn't have fit into a private car whatever the size. We embraced to greet each other and I got down to organizing things. As it happened, the defense of a pediatrician colleague for the candidate degree was taking place at the Academy of Sciences that day. Many people from our hospital had travelled to this event by coach. We returned to Debrecen via Ferihegy, with the coach heavily loaded.

We unpacked the valuable package with the endoscope in it sent to us with the following choice: it was ours to use for a year and after that we could either purchase it or return it to Germany. With Professor Vogel's help my colleagues Imre Hódi and Endre Holman and I installed the extraordinary equipment and began performing percutaneous and ureteroscopy surgeries. We were not only removing stones but smaller tumors, too, and extended its use to treat diverse developmental disorders as well. We also used this technique to correct stenosis of the renal pelvis outflow, too. The surgeries were performed in the operating theatre of the emergency department since that was where the image-enhancing X-ray was. We were allowed to use the operating theatre on Saturday. We had to cross a small brook to carry the clothes basket packed with infusion bottles from the urology department to the emergency surgery building at about 200- 300 meters from the urology department. On one occasion the good horticultural worker painting the decorative chains of the bridge looked after us, and said to have a nice day at work. That afternoon, after we had performed four percutaneous surgeries we were heading back over the bridge when our man, who had apparently painted five links, asked us, 'so, was it a success?' And went on with his work, which, in fact, could have been finished in 10 minutes.

Our surgeries went ahead more and more safely and briskly. Of course, the press, the radio and television also caught on. The public asked the report made by Judit Juhász to be repeated at least four times. One report was so popular with the public that it had to be rerun four times on Radio.

However, there were some who could not handle our success. I got summoned to a disciplinary hearing. For days, I had no idea why I should be tried. Chairman of the disciplinary committee: you have been advertising yourself in newspapers in connection with percutaneous kidney surgeries. Before I could say anything, a member of the committee rose and explained that it wasn't me who had advertised the big event in all the local and county papers but a former patient of my department, who happened to be the Szeged correspondent of MTI (Hungarian News Agency). At this point the disciplinary hearing was no longer justified and was dismissed. Life is changeable. A few years later I performed a percutaneous nephrolithotomy on the person who had clarified my case. And the person who had accused me I operated on for prostate issues. The two no longer came to Szentes to ask for my help but to my new workplace.

The social cooperation with which people were trying to help purchase the equipment for the hospital was amazing. At the time so-called communist Saturdays were organized, and the money the socialist brigades earned was transferred to the hospital's account; programs were organized in nurseries and the proceeds were transferred to help purchase the equipment; there were waste collections organized with the same aim, and private citizens were donating money, too. Posters were placed in the streets and shop windows in Szentes saying that we can keep the equipment here if we join forces. And, miracle of miracles, it did happen!

We had an enormous number of patients. Two colleagues and I performed 2 or 3 endoscopic kidney and ureter surgeries in addition to the other operations. We had calls expressing interest from all corners of the country: they wanted to master the new technique. Some of them even paid us a visit, sacrificing their days off, without their superiors knowing about it. There was a prestigious chief physician who referred to our activity in a newspaper article as quackery. As luck would have it, this issue was forwarded to us by a man living in the same town as the chief physician, who had a huge kidney stone removed a few days before he returned home. A couple of months later the chief physician apologized to me in his own hospital and expressed his appreciation. Our friendship has been steadfast ever since.

We demonstrated and taught the use of the new technique to specialists of half the country. Doctors came to study it from Poland, (then) Czechoslovakia, Yugoslavia, and Romania. And I got invited to numerous places to perform demonstration surgeries and give lectures such as Graz, Brno, Oradea, Targu Mures, Timisoara, Bucharest, Oradea, Sanaa (Yemen), and Sadik Abad (Pakistan).

We gained so much experience that, seeing the ever-expanding interest, we made our knowledge accessible in a textbook. The book launch did not go as smoothly as I had anticipated, either. Two influential professors objected to a provincial place having a textbook published at the publishing house. The publisher gave them a deadline by which they had to submit their own manuscript, and then the publisher would choose the better one. It was at this time that a patient had a percutaneous nephrolithotomy at our

Annals of Clinical and Medical Case Reports

department, who was himself working on a manuscript for a literary history book and we had a chat about the difficulties of publishing. A couple of weeks later I received a phone call from the publisher saying that I should go and sign the contract before 4 p.m. that day, as the other manuscript had not arrived but their deadline had expired. And this is exactly what I did. It was only later that I found out that the man who intervened in the background, now without his kidney stone, was none other than secretary to György Aczél, the most influential figure in socialist culture politics. In the course of the thousands of percutaneous nephrolithotomy surgeries we were able to develop a new, never-before used, technique. In order to remove stones embedded in the middle segment of the ureter, we introduced percutaneous ureterolithotomy whereas for the removal of stones embedded in the mouth of the ureter we devised and introduced ostiolitholapaxy.

This field gradually became so large and diverse that it produced several scientific degrees. I became doctor of medical sciences and university professor at the Medical University of Debrecen, and several of my colleagues became candidates, holders of Ph D degrees or received their habilitation degree in the field.

I did not have a hard task doing my work creating a new school of thought. You only need to show things, explain things, help talented colleagues, allow them to practice and they absorb everything, which they later improve. Nothing can be missed from this list. Besides diagnostics, endoscopic, laparoscopic and transurethral surgeries, exploratory surgeries are also characterized by the highest levels of expertise, consistence and compassionate patient care.