
LEGENDS IN UROLOGY



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I am very honoured to have received an invitation from the Canadian Journal of Urology to contribute to the *Legends in Urology*. While I do not think that I am a legend, I accepted the invitation immediately, in order to show young urologists what can be done in a lifetime when you have strong beliefs in ideas and you are determined to apply them.

My father was a Professor of Medicine and a pianist. I decided to become a urologist after an internship at the Necker Hospital in Paris where, as a young student of medicine, I was assigned to the Urologic Clinic of Professor Roger Couvelaire. There I discovered my interest in this medical-surgical specialty, and never wavered from then on.

My training was that of a typical French resident in urology: 4 years of basic surgical and urological training after completing medical school, to become a junior urologist, and then 4 years as a head of a clinic to become senior urologist. I am a former trainee from La Pitie-Salpetriere Hospital in Paris, where Professor René Kuss installed me with a spirit of constant innovation while keeping in mind to never harm or endanger the lives of our patients. In 1982, I joined Dr. Jean Marie Brisset at the Porte de Choisy Medical and Surgical Center. Our aim was to develop techniques in endourology for the treatment of renal and ureteral lithiasis, techniques that were at this point in their infancy.

We were the first French team to perform percutaneous ablation of renal calculi, and we further developed clinical research in ultrasound lithotripsy using the world's first lithotripter for renal calculi, which became available to our service in 1983. At this point, our Department of Urology was a highly regarded lithiasis center and patient recruitment was rather important. Staghorn calculi operations were performed on a weekly basis. The solid developments we accomplished with these techniques allowed me to perform dozens of surgical demonstrations and to participate in a great number of surgical meetings around the world. During this period of my life I was honored to meet several foreign urologists who would later become my friends. I was also very interested in the urological community and participated in the French Association of Urology. In 1986 I was first elected General Secretary of that association, a position I filled for two terms of 3 years each. It is during this time when, with the assistance of an enthusiastic and motivated group of colleagues, we transformed the French Association of Urology by modernizing its infrastructure, in order to make it a real *home*, for all the urologists in our country.

In 1992 I was appointed Professor of Urology at the Faculty of Medicine, Broussais Hôtel-Dieu, in Paris. In 1996 I became Head of the Department of Urology at the Porte de Choisy Medical and Surgical Center, which would later become the Institut Montsouris.

During this time I began to develop our experience with upper urinary tract laparoscopic surgery. Professor François Dubois was a staff surgeon at our institution. He was one of the pioneers of laparoscopic surgery who developed the laparoscopic cholecystectomy technique. I am very proud to state that it was thanks to the visual field provided by a cystoscope, the property of the Department of Urology, that Professor Dubois accomplished his initial laparoscopic cases. At this time, the operator performed surgery with an eye perspective only, as there was no camera, meaning that the surgeon was the only surgical team member able to see, while the surgical assistant held instruments in a blinded fashion. Furthermore, insufflators had not yet been developed, so it was really difficult and daring to engage in such interventions.

Based on my acquired experience in laparoscopic renal surgery and satisfied with its benefits for the patient compared to open surgery, specially in terms of perioperative morbidity, I decided to expand the application of laparoscopic principles to other genitourinary procedures as well.

That is how the idea of laparoscopic prostatectomy emerged. We performed our first case on January 21, 1998, with my colleague, Bertrand Guillonnet. The first laparoscopic radical prostatectomy was accomplished successfully and soon after we realized the interest generated by this operation. At the beginning of our experience, operative time reached approximately 6 hours. It was hard to keep in mind the oncologic objectives of the operation while adapting to the laparoscopic environment, but in a step-by-step fashion we managed to gradually reduce operative time to 3 hours, and today each procedure lasts about an hour and a half.

A first, a brief publication in a French medical journal presented our initial 28 cases. Shortly after, the editor of the American journal, *The Prostate*, contacted me personally by telephone, to let me know that he was very interested in publishing an article on laparoscopic radical prostatectomy in his journal. We had by then performed more than 60 cases, and we sent him a manuscript based on this data. This paper came as a bomb in the urological community. There had been an earlier report of nine cases of laparoscopic prostatectomy by an American team, but they discouraged use of the procedure due to the very long operative time. We started by standardizing our procedure, with a transperitoneal approach that we called *Montsouris Technique 1*. Later, after an experience of 18 months, we decided to switch to an extraperitoneal approach, which was named *Montsouris Technique 2*. Due to a higher incidence of localized prostate cancer, a consequence of the increased utilization of screening, the minimally invasive technique was immediately embraced by the urological community. I have very pleasant memories of those early years of refining the laparoscopic radical prostatectomy technique, when we shared our operating rooms with colleagues from all around the world. Urologists from all over the world came to observe the operations, some skeptical at first, but all leaving with great impressions. Some came into the operating room, and many others watched the surgery from large screens that we set up in the department. We would then go have lunch and enjoy a good bottle of wine from a Bordeaux château or an amazing wine from Bourgogne, while discussing technical tips and pearls as well as the operation's difficulties. We made friends in the international urological community and helped to popularize the procedure. Many of the best known laparoscopic, and eventually robotic surgeons of the world received their first exposure to the procedure in Paris, at the Institute Montsouris. What a wonderful time that was!

Today, our Department is a highly dedicated urologic oncology service, where we perform over 500 prostatectomies per year and we train surgeons from abroad with a step-by-step philosophy: the same one we applied to teach ourselves at the beginning. Numerous articles about our technique and outcomes with this procedure have been published in major urological journals.

Laparoscopic radical prostatectomy was extremely controversial in the beginning, and skeptics strongly disapproved of this technique, with comments such as: *"We cannot touch and feel the cancer, the field of vision is narrow, and when operating for cancer, one needs to have broad incisions."* All these arguments had to be fought head-to-head and we were committed to do so. Today, the evidence shows that laparoscopy brings indisputable gains for the patient in terms of postoperative results.

At the end of the 1990s, I became interested in robotics, and I started working in collaboration with a company that introduced robotic technology into surgery: Computer Motion Inc. We developed a robotic-commanded camera holder. Very quickly, I realized that the future was an integrated system, isolated from the operating table, such as the interface with the da Vinci System, from Intuitive Surgical Inc. I was invited by Intuitive to Mountain View, California, to perform a prostatectomy demonstration on a cadaver model in order to verify how we could further improve the device. Today, we have continued a permanent collaboration with Intuitive to improve their product, especially in the development of robotic instruments.

At the same time that I was developing these techniques with the team at Montsouris, including Xavier Cathelineau—who will soon succeed me as Head of the Department of Urology—I was becoming more and more interested in surgical developments in France. I was especially interested in a particular issue that is common to all industrialized countries: the difficulties with concentrating human and material resources to be able to further develop surgical techniques, keep up with technology, and ensure adequate outcomes. This is a difficult topic that always creates

political misunderstandings while as we all know, surgical safety might require the concentration of resources in selected centers of excellence to accomplish the best results.

Internationally, I was part of the team that together with Frans Debruyne made possible the evolution of the European Association of Urology into a truly modern structure. Frans asked me to be Chairman of the Committee of Bylaws that reaffirmed the association's governance. I then attended the European Academy of Surgery, participating in the policy planning committee. This allowed me to meet a number of European urologists and develop international relationships with urologists from South America, North America, and Asia, during the surgical demonstrations and scientific symposia.

When I look at the evolution of our surgical specialty during the last 35 years that I have been active in our field, I am amazed by the incredible development of operating techniques and the advancements in postoperative care. Perhaps in the future, enormous developments in imaging techniques and molecular biology will transform the basic clinical principles we all learned into new ways to use simple accessory tools to improve our approach to surgery and to benefit the patient.

I am convinced that in future, thanks to technical resources that will become available, we will create new paradigms in surgery: surgical engineers and mechanical surgical assistants. In the surgical theater, these advances will provide us with novel technological features for education, simulation, computing, and video assistance, everything that we may need for decision-making. The essential element of the surgical mentality is to always think ahead 20 years and implement within the next 6 months. Without a sustained vision into the future, the actions in the present might become meaningless. It is mandatory to fight against prejudice, taboos, and stale traditions that clutter our brains and slow down the progress. The specialty of Urology has beautiful days ahead, if we manage to adapt constantly to the ever-changing conditions of our specialty and the environment in which we practice.

As I look back on my career, I am proud to have contributed over 350 peer-reviewed articles, written or collaborated on 31 books, and made over 45 videos and movies. I have been invited as a speaker to a great number of medical and surgical meetings to make presentations on different topics of urology. I also made sure that I set aside the time to pursue many interests, including music. I started by playing guitar and I was contrabassist in a jazz orchestra when I was a student. I also play the cello and a little piano, and I regularly sing with a group of friends.

My wife, a hospital pathologist, and my three children have always encouraged me to pursue my ideas. It is with their support, and the support of my friends and colleagues that I have been able to accomplish my professional dreams.

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