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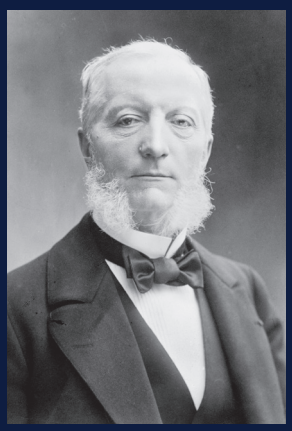
The French Origins of Urology

A political, social and medical revolution



eau History Office

Presented on the occasion of the 39th Annual EAU Congress

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French Contributions To Urology

The French contributions to Urology are significant. In fact, urology as a recognised specialty, separate from general surgery, started in France as a consequence of events and decisions after the French Revolution (1789). However, in the centuries before the revolution, French anatomists, researchers and (barber-) surgeons, including wandering lithotomists, already contributed as forerunners to the development of established surgical interventions on the urogenital tract.

France was one of the first countries where a separation between medical doctors and surgeons was established, which made it possible for urogenital surgery to progress to a respected specialty within surgery. Coincidentally (or perhaps not) several French revolutionaries were surgeons specialised in urogenital surgery, and prepared the way for urology as a surgical subspecialty.

The application of endoscopy and the introduction of new surgical techniques by visionary French surgeons at the end of the 19th century were pivotal in the need for specific training in the art of urogenital surgery. This resulted in the first University Chair in Urology and the first Urology Department, possibly worldwide, being established in France. This pioneering role of urology in France paved the way for several major French contributions to urology since.

Jean Baseilhac or Frère Côme (1703-1781), etching, 18th cent., priv. coll.

From barbers to urogenital surgeons

Before the French Revolution there was no well-organised healthcare in France. Hospitals were founded by the Catholic Church, sometimes in combination with private funds from wealthy citizens and nobility. The physical care was the responsibility of nuns and priests that felt more responsible for the soul of the sick than for their physical wellbeing. The care was poor due to an enormous overpopulation, and the mortality was high also due to the fact that people would be admitted at their last phase of life. University-trained medical doctors were rarely visiting the hospital grounds, as only God could care for the sick (*Christus medicus*). Moreover, the medical doctors of that time were not interested in clinical care and saw for themselves a more intellectual role in advising especially rich people that were ill. They would never touch a patient and if necessary, make a diagnosis by history taking only.

Surgical procedures were performed by barber-surgeons (or surgeon-barbers?) that had no university degree and were running a barbershop besides performing limited surgical interventions. However, specific surgical procedures, such as the removal of bladder stones, were performed by wandering quacks (lithotomists). Some of these lithotomists, such as Frère Jacques and Jean Baseilhac also known as Frère Côme, were very famous and travelled to other countries to 'show' their skills. They visited a city, performed some surgeries and left immediately afterwards, not waiting for the complications that were numerous, resulting in a very high mortality.

A very important figure in French medicine and a forerunner in the art of urogenital anatomy and surgery was Ambroise Paré (1510-1590). He is considered

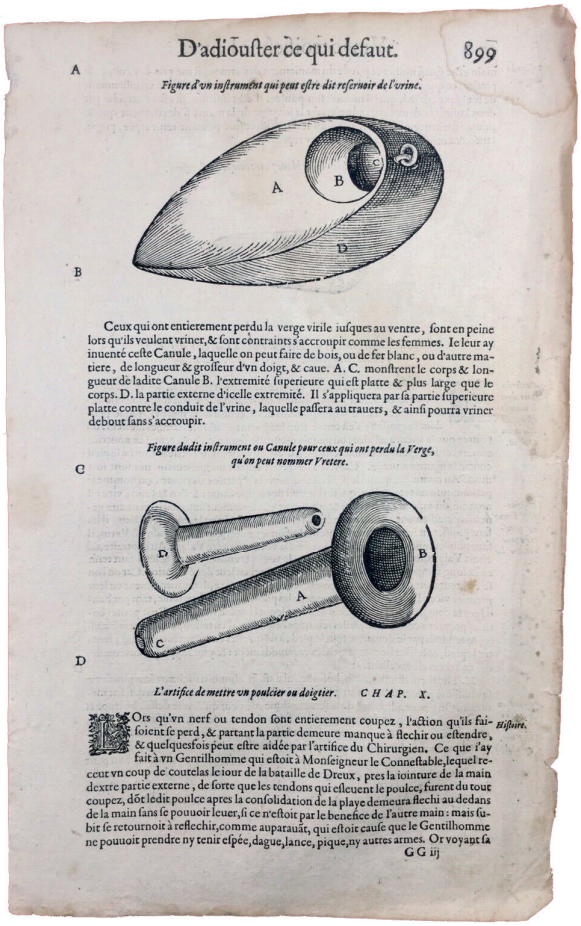
one of the fathers of modern surgery, due to his novel thoughts and pioneering techniques, particularly in battlefield surgery and the care of wounds. He was surgeon to four French kings: Henry II, Francis II, Charles IX and Henry III. In urogenital therapy, he devised early versions of instruments for the treatment of urethral stricture, and presented newly developed instruments for removing stones. He also described a device to help men to pass urine following penile amputation.

During the first half of the 18th century there was an urgent need for ameliorating the quality of surgical interventions, and hence the necessity to establish a specific group of medical doctors that would be university trained and perform surgery. Based on the efforts of François Gigot de Lapeyronie (1678-1747), known by many urologists mainly for the pathology that bears his name, surgeons became increasingly recognised as respectable medical professionals at the same level as the 'real' medical doctors. In 1731 the "Académie Royale de Chirurgie" was founded, and the quality of teaching improved.

With the 'Déclaration du Roy' of April 23, 1743, the separation between surgeons and barbers was established, and the surgeons were positioned at the same level as the medical doctors. Indeed the 'Déclaration des Droits du Chirurgien' imposed the separation between the 'surgeons with the long coat' and the 'surgeons with the short coat' (the barber-surgeons). The training required to become a surgeon was (re)organised: studies became longer, more difficult, and even better controlled than the medical studies. Specific practical teaching was established with 'démonstrateurs' that were positioned at the same level as university professors. Initially the declaration and the consequences were only valid in Paris, but were extended in 1745 to the Surgical School of Montpellier and later Lyon. However, it was only after the French Revolution that both specialties were integrated at the same level within the university system.

The French Revolution in medicine

The French Revolution (1789-1799) caused a radical social and political change, and had significant effects on French society, including the organisation of medical care. The power of the monarchy, nobility and the



D'adiouſter ce qui defaut. 899

Figure d'vn inſtrument qui peut eſtre dit reſeruoir de l'vrine.

Ceux qui ont entierement perdu la verge virile iuſques au ventre, ſont en peine lors qu'ils veulent vriner, & ſont contraints s'accroupir comme les femmes. Ie leur ay inuenté ceſte Canule, laquelle on peut faire de bois, ou de fer blanc, ou d'autre matiere, de longueur & groſſeur d'vn doigt, & caue. A. C. monſtrent le corps & longueur de ladite Canule B. l'extremité ſuperieure qui eſt platte & plus large que le corps. D. la partie externe d'icelle extremité. Il s'appliquera par ſa partie ſuperieure platte contre le conduit de l'vrine, laquelle paſſera au trauers, & ainſi pourra vriner debout ſans s'accroupir.

Figure dudit inſtrument ou Canule pour ceux qui ont perdu la Verge, qu'on peut nommer Fretere.

L'artifice de mettre vn poulcier ou doigtier. CHAP. X.

Ors qu'vn nerf ou tendon ſont entierement coupez, l'action qu'ils faiſoient ſe perd, & partant la partie demeure manque à flechir ou eſtendre, & quelquesfois peut eſtre aidée par l'artifice du Chirurgien. Ce que i'ay fait à vn Gentilhomme qui eſtoit à Monſeigneur le Conneſtable, lequel receut vn coup de coutelas le iour de la bataille de Dreux, pres la iointure de la main dextre partie externe, de ſorte que les tendons qui eſleuent le poulce, furent du tout coupez, dót ledit poulce apres la conſolidation de la playe demeura flechi au dedans de la main ſans ſe pouuoir leuer, ſi ce n'eſtoit par le benefice de l'autre main: mais ſubit ſe retournoit à reflechir, comme auparauãt, qui eſtoit cauſe que le Gentilhomme ne pouuoit prendre ny tenir eſpée, dague, lance, pique, ny autres armes. Or voyant ſa

Eſtſure.

GG iij

Page 899 from the surgical textbook by Ambroise Paré (2nd edition, 1579), illustrating a receptaculum for urine collection after penile amputation.

François Gigot de Lapeyronie (1678-1747), portrait etching (1824), priv. coll.

catholic church declined, and there was an upswing of democracy and nationalism. The advent of ideals of liberalism and enlightenment stimulated new ideas for a society that was suffering from the privileges of clergy and aristocracy.

On the 14th of July, 1789, the Bastille was attacked by the revolutionaries, and on the 4th of August the 'Rights of Man and Citizen' were published. The consequences and outcome of the French Revolution were the abolishment of feudalism and monarchy and the inauguration of the 'French Republic' (September 22, 1792).

The French political revolution also caused a medical revolution. The former regime was suspected to support medical doctors, and the social role of the medical system was questioned by the revolutionaries. Medical doctors were assumed to be corrupt, and the revolutionaries aimed to abolish hospitals, medical schools and even …doctors!

However the revolutionaries soon realised that medical doctors still were needed and, based on revolutionary principles, a 'new' type of medicine was organised, based the former 'old' concepts. Medical education was transformed, and earlier practical learning based on observation and experimentation was introduced in the medical schools. The basic principle was: "Read little, see a lot, and do much." New hospital systems were created, also including a new architectural organisation with separate wards for surgical and non-surgical patients. In the innovative medical approach, old techniques were combined with new developed technology.

From urogenital surgeons to urologists

Several medical doctors specialised in uro-genital pathology and surgery played a part in the French Revolution. One of them was Jean-Paul Marat (1743-1793). He had a medical degree from the University of Paris, and presented in 1778 a thesis in London entitled '*Essay on Gonorrhea*'. In Paris he established a successful clinical practice in electrotherapy, treating amongst other problems many patients with functional bladder problems. From 1788 on he dedicated himself full-time to politics and became representative for the National Convention (1792). He ordered the execution of Louis XVI and Lavoisier, but was murdered himself on July 13, 1793.

Two other important revolutionaries, Pierre Joseph Desault (1747-1795) and François Chopart (1743-1795) were also medical doctors with special interest in urogenital surgery. Desault was chief of Surgery at l'Hôtel Dieu Hospital in Paris. He insisted on considering the urinary tract as a whole, and promoted the integration of physiology and pathology of the lower urinary tract. His colleague and friend (as doctor and republican) François Chopart worked together with Desault and published in 1792, at the instigation of Desault, the book '*Traité des Maladies des Voies Urinaires*', which was one of the first handbooks for urogenital pathology and treatment.

A remarkable revolutionary and doctor was Joseph Souberbielle (1754-1846). He was a descendant of the famous lithotomist Jean Baseilhac (1703-1781), also known as Frère Côme. Souberbielle was appointed as surgeon for the urinary tract at the Hôtel Dieu in Paris in 1774, and performed over 1200 well-documented suprapubic lithotomies.

The need for further subspecialisation, also within surgery, as a consequence of the revolutionary principles,

Joseph Souberbielle, painting (1814) by Adèle Romany, with in the background the bust of his uncle the lithotomist Jean Baseilhac, National Gendarmerie Museum (Paris).

Jean Civiale (1792–1867), portrait photo (1860) by Trinquart, priv. coll.

prompted some brave individuals to limit their activities to specific organs. One such man was Jean Civiale (1792-1867). During his training he was in contact with Joseph Souberbielle and observed numerous open suprapubic cystotomies for the removal of bladder stones. He was appointed as a surgeon with specific interest in urogenital surgery at the Hôpital Necker in 1816, and became famous for his development in 1818 of a new type of lithotriptor. In 1829 he started a specific department for "Surgery of the Urinary Tract", but was initially heavily criticised by other surgeons. One of his major opponents was the general surgeon Alfred-Armand-Louis-Marie Velpeau (1795-1867). He opposed the new techniques of instrumental lithotripsy as promoted by Civiale, and insisted on open surgery for removal of bladder stones. However, Civiale continued his practice against all odds, and was very successful in removing bladder stones with limited morbidity and low mortality.

Urology as a surgical subspecialty

One of Civiale's pupils Jean Casimir Félix Guyon (1831-1920) would become the first professor of Urology and was the big promoter of the new less invasive techniques in surgery of the lower urinary tract. Guyon was born in Nantes from a French father and a Creole mother. He was brilliant pupil and moved to Paris to study medicine. He had his initial surgical training with Velpeau, but moved in 1862 to Necker for an additional training with Civiale. After the death of Civiale in 1867 Guyon became chairman of the "Department for Surgery of the Urinary Tract" and was accepted as 'Professeur d'Urologie' in 1890. After that he changed the name of his department into 'Service d'Urologie'. Urology as a separate specialty was born!

Guyon can be considered the Godfather of (French) urology and his contributions in clinical as well as in experimental urology are enormous. His textbook *Leçons cliniques sur les maladies des voies urinaires : professées à l'hôpital Necker* was one of the first specific textbooks that presented a scientific basis for the diagnosis and therapy of urologic pathology. In this textbook he develops a methodical rationale and insists on strict ethical principles in treating patients with urogenital pathology. This pivotal work is still a valuable compendium of urology, more than a century later. Guyon also pioneered translational research and insisted on the importance of connecting anatomy, (patho)physiology and pathology within urology as a specialty with surgical and non-surgical aspects.

French urology in Europe and the rest of the world

Guyon was responsible for the creation of the Association Française d'Urologie (AFU) in 1896, and chaired its congresses from 1896 to 1910. However, he soon realised that urologists and urological surgeons from different countries should meet and together with Ernest Desnos (1853-1925) he was responsible for the

Jean Casimir Félix Guyon (1831-1920), portrait photo (ca. 1870) by Nadar, priv. coll.

creation of the Association Internationale d'Urologie (AIU) in 1907. The first meeting of the newly founded AIU took place in Paris the next year, and from 1907 to 1914 Guyon was the President. In 1921 the AIU was renamed to SIU (Société Internationale d'Urologie).

Guyon was also a driving force behind an internationalisation of French urology. Numerous foreign surgeons with urological interest, amongst them the famous British urological surgeon Sir Henry Thompson, visited his department and these visitors were responsible for exporting the developments of French urology all over the world. Guyon was a visiting professor in several major surgical centers in Europe, which increased his personal fame, but also promoted the leading role of French urology.

Guyon was a pioneer also when it came to organising his department: he offered positions to non-French colleagues. Amongst them to Joaquin Albarran, a very skilled urologic surgeon and a superb researcher, originally from Cuba but initially trained in Barcelona. Albarran was recruited by Guyon, and appointed as Professor of Urology, and with the intention to succeed to Guyon as chairman of the department of urology at Necker hospital. Unfortunately Albarran died in 1912 at age 52 from tuberculosis, a disease he contracted while performing an autopsy on a patient that died from the same disease.

Albarran was succeeded by Felix Legueu, who organised one of the first multidisciplinary teams looking after patients with urogenital problems. Some very skilled urologists, among others Georges Marion, followed these earlier pioneers, and established the French School of Urology. Several French urologists (Couvelaire, Cukier, Küss) contributed to the events that shaped urology in the 20th century, including the early development of new instruments and techniques such as kidney transplantation. These colleagues are followed by numerous contemporary urologists that establish an important role for French Urology in the 21st century.

French urology and the EAU

French urologists played an important in the founding and establishing of the EAU as a European association with an international aim. Indeed, the first concrete steps in the foundation of the EAU took place in the wings of the 66th Congress of the Association Française d'Urologie (AFU) in September 1972. Ten urologists from across Europe gathered for a lunch at the urology department of professor Couvelaire at the Hôpital Necker in Paris, and discussed the ambitions for what would become the EAU, including plans to start a new journal, *European Urology*.

The final constituent assembly took place in Amsterdam during the 16th congress of the Société Internationale d'Urologie (SIU) in 1973. The fact that the SIU was founded by Felix Guyon, adds an extra kind of French connection to the foundation of the EAU.

During the 6th EAU Congress in Copenhagen (Denmark) in 1984, the French Prof. Adolphe Steg was elected as the second Secretary General of the EAU, succeeding the French-speaking Belgian urologist professor Willy Gregoir. Professor Steg held this position until 1992 and transformed the EAU in those eight years from a small association with a limited number of members to THE pan-European organisation, also thanks to the fall of the iron curtain in 1989. In 1996, Prof. Laurent Boccon-Gibod became chair of the Scientific Committee, and he was responsible for a major upgrade in the quality of the programme of the Annual Congress. In 2004 yet another French urologist, Pierre Teillac became Secretary-General of the EAU and he led the Association until 2007.

Adolphe Steg (1925-2021), EAU Secretary General 1984-1992, photo by Jacques Graf (1996).

The recognition of French contributions to urology was also expressed when the EAU Frans Debruyne Lifetime Achievement Award was presented to Prof. Didier Jacqmin, and the 2022 Desnos Prize for contributions to the History of Urology to Prof. Alain Jardin and the AFU's History Office: "Le Cercle Guyon".

The 2024 Ernest Desnos Prize Winner

By Prof. Philip Van Kerrebroeck, EAU History Office Chair

The 2024 Desnos Prize for contributions to the History of Urology is awarded to Dr. Johan J. Mattelaer. Johan graduated as a medical doctor in 1962, and after four years training in general surgery, he did his residency in urology abroad. In 1969, he started to work as the sole urologist in his native city of Kortrijk (Belgium), and stopped his hospital work in 2003 as part of a team of five urologists. Already as a teenager he developed an interest in the history of medicine, and focused gradually on the history of urology.

In 1990 Johan was invited to set up a Historical Exhibition at the 9th EAU congress in Amsterdam. This initiative was followed by the establishment of the Historical Committee of the EAU (a precursor to the EAU History Office), which he chaired for ten years. In 1994 he started the annual publication of *de Historia Urologia Europaeae*, and was its editor for the first ten editions. Johan authored and contributed to several books on the history of urology and sexology, many of which were presented over the years as a congress gift at the EAU congresses, a tradition that continues to this day. Even at age 86 he co-authored the 2024 publication *Urology in Art*!

For his many contributions to urology and in particular to the history of our specialty, he became an Honorary Member of the EAU in 2003, and in 2009 he was honoured with the Frans Debruyne Lifetime Achievement Award. This Desnos Prize for his work on the history of our field in particular completes this "triple" of recognition by the EAU.

Johan Mattelaer, the 2024 EAU Desnos prize winner, and his wife Anne.

In a recent interview, Johan commented on his interest in the history of urology as follows:

Within the universe of medicine, which remains both an art and a science, urology is a fascinating and flourishing specialty. Urologists can rightly be proud of what they have achieved throughout the long course of medical history. They have been founders and pioneers in many different areas of knowledge and expertise. Circumcision, castration, and lithotomy are the oldest known surgical procedures, and uroscopy, the careful examination of urine in a clear glass matula, is the oldest diagnostic tool in medicine.

After many centuries of work by these uroscopists, barber surgeons and stone cutters, the second half of the 19th century witnessed the start of urology, with the founding of major urological centres in cities such as Paris, London, Berlin, and Vienna. This breakthrough coincided with the invention in 1879 of the cystoscope. It was with the aid of a cystoscope that the first laparoscopy was performed in 1901. Urologists have also been pioneers of minimally-invasive surgery, and were among the first to embrace laparoscopic interventions and robot-assisted urology.

Urologists have many reasons to be proud of their contribution, and therefore I continue to be fascinated by the history of urology.

We join Johan in these statements and we hope that his enthusiasm for the history of urology may become contagious for all members of the EAU, as our history shows us the way and can guide us towards better patient care!

Dr. Mattelaer will be honoured with the Desnos Prize at the EAU24 Opening Ceremony held in eURO Auditorium 1 on Friday from 18:00

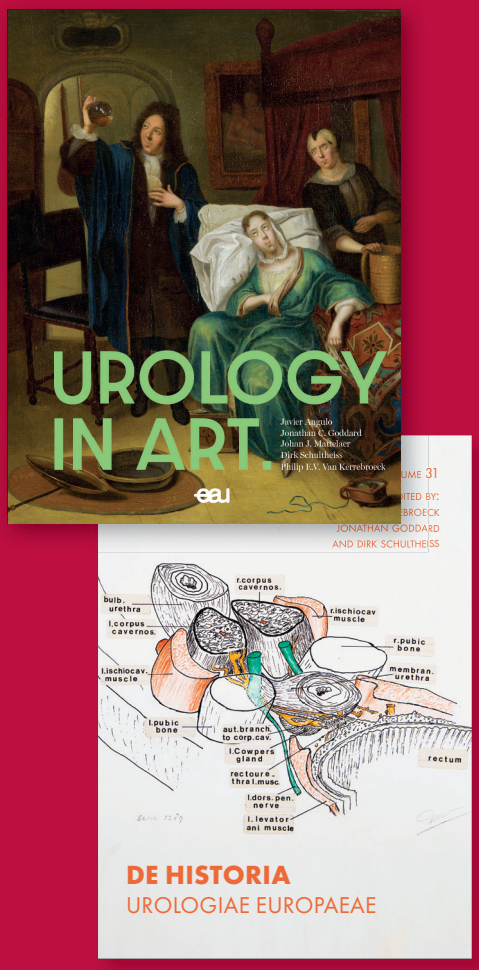
The EAU History Office at EAU24

Special Session:
French contributions to urology
Saturday, 6 April 15:00 - 17:00
Purple Area, N01

Abstract Session 17:
History of Urology
Saturday, 6 April 17:15 - 18:45
Purple Area, N01

New Publications at EAU24

EAU24 Congress Gift: *Urology in Art*
A unique, fully illustrated coffee table book on depictions of urology in art: ancient, medieval, contemporary, western and non-western. Contains depictions of doctors, patients, urological disease, depictions of surgical procedures and techniques. A collaboration by five EAU History Office members that offers a unique look at our field. Keep a copy in your office, home or waiting room!



De Historia Urologiae Europaeae Vol. 31
The latest edition of a long-running series published by the EAU History Office. Features new research into the history of urology, with submissions from a large variety of authors on many different subjects. This year's edition features a beautifully-illustrated first-hand report by Prof. Patrick Walsh on his discovery, with Prof. Pieter Donker, of the nerve-sparing radical prostatectomy in the early 1980s.

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