

HF02-11 INTERVENTIONAL UROLOGY—A JOURNEY IN INNOVATION

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INTRODUCTION AND OBJECTIVE: The foundation of 'Interventional Urology (IU)' was adapted from a narrative of cutting-edge discoveries that transformed contemporary practice patterns. This study investigated the key milestones and individuals involved in advancing the paradigm for urological diagnostics and treatment.

METHODS: A comprehensive literature review was performed to describe relevant historical and clinical information.

RESULTS: In 1877, Max Nitze's invention of the cystoscope marked the first direct visualization of the urinary system and helped to pioneer more advanced diagnostics. Similarly, Wilhelm Röntgen's discovery of X-rays in 1895 ushered in a new era of radiological imaging. Less than a year later, John Macintyre used X-ray to image a kidney stone and demonstrated the potential for non-invasive visualization of urological conditions. In 1912, Joaquin Albarran introduced radiolucent catheters, earning him a Nobel prize nomination. In 1939, Archie Dean executed the first percutaneous renal puncture, opening doors to minimally invasive (MIS) interventions. The 1960s saw Dr. Charles T. Dotter pioneering interventional radiology, followed by Drs. Reynard and Ritchey's groundbreaking work on image-guided targeting in the 1970s. Dr. Howard M. Pollack founded 'Uroradiology' in 1974, solidifying the importance of radiological expertise in Urology. The late 20th century witnessed additional pushes for MIS, exemplified by Fernström's publication on percutaneous stone removal in 1976. These principles were further adopted by Dr. Arthur Smith to establish what we now know as 'Endourology.' The 1990s to 2000s further pushed the boundaries of MIS with laparoscopic and robotic surgery. Initially criticized, these advancements have since become standard, though they were revolutionary when introduced. In the early 2000s, prostate artery embolization and MRI-US fusion made their debut, exemplifying the application of image-guided treatment and the field of IU. By the 2010s, MRI had become central to prostate cancer surveillance/diagnosis and remains standard of care. Drs. Rastinehad and Siegel published the first "Interventional Urology" textbook in 2016. Fast forward to 2023, advances in image-guided targeting have afforded exciting advancements in IU to supplement MIS treatment options (ablation, embolization, biopsy, etc.), all championed by past innovators.

CONCLUSIONS: The establishment of Interventional Urology is a testament to its pioneers. The future of urologic care heralds a paradigm shift of targeted, patient-centric treatment model that aims to benefit patient care with contemporary advancements.

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HF02-12 A 25-YEAR CELEBRATION OF THE LITTLE BLUE PILL THAT REVOLUTIONIZED AN INDUSTRY

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INTRODUCTION AND OBJECTIVE: The 25th anniversary of sildenafil marks a significant milestone in the history of pharmaceutical innovation. We aim to provide a comprehensive overview of the impact and legacy of the little blue pill over the past quarter-century.

METHODS: Extensive web-based research provided the primary source of information.

RESULTS: Identified in the early 1990's by Pfizer as a possible therapeutic to enhance erectile function, the speed by which sildenafil went from bench to bedside took only an unheard of 6 years. The drug unequivocally changed the sexual landscape of America and the world. In 1998, sildenafil received FDA approval for the treatment of erectile dysfunction (ED), and men everywhere rushed to their doctors for a prescription for the blockbuster little blue pill. Sildenafil had some of the fastest prescription uptakes and sales growth of any medication ever. In

the early days, up to 10,000 prescriptions daily were written. Urologists were using rubber stamps to churn out prescriptions. By 2008, the medication was bringing in \$2 billion in annual sales. Since its debut in 1998 until the patent expiration 20 years later, the drug resulted in at least \$40 billion in revenue. How Pfizer accomplished this unprecedented success and meteoric rise is remarkable. Pfizer deployed one of the most successful advertising campaigns in history, featuring Senator Bob Dole, who openly discussed his struggle with impotence. Dole transformed the conversation, destigmatizing impotence and establishing it as a medical problem that could be openly discussed by patients and providers. 'Erectile dysfunction' emerged as a medical diagnosis that could be treated and entered the common medical lexicon. Pfizer showed the medical community the power of a pharmaceutical company to change the mindset of the professional conversation and were even instrumental in the development of a standardized metric of erectile function, the IIEF, still used today. Now, 25 years later, the patent has expired, and sildenafil is generic. Established PDE5-i competitors offer various ED treatment options. Prescriptions declined over 20% since 2012. The name-brand is no longer the market force it once was, but its impact on modern sex and men's health remains unparalleled.

CONCLUSIONS: The 25th anniversary of the little blue pill marks a remarkable journey from accidental discovery to a medical and cultural icon. Beyond financial success, sildenafil redefined discussions about modern sexuality, broke stigmas, and improved quality of life. This celebration underscores the profound, enduring impact of sildenafil on medicine and culture.

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HF02-13 BEND ME, SHAPE ME: HISTORICAL TREATMENTS OF PEYRONIE'S DISEASE

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INTRODUCTION AND OBJECTIVE: Peyronie's disease (PD), a challenging urologic condition characterized by penile pain, curvature, and sexual dysfunction, has caused bother for centuries. We examined some of the more creative PD treatments over time.

METHODS: A comprehensive literature review was performed using PubMed database, Google Scholar, and texts regarding the "historical treatments of PD," "induratio penis plastica," or "Van Buren's disease".

RESULTS: PD was first pictorially displayed in 3000 BC Minoan art. The Kama Sutra described curvatures of the penis leading to winding of semen. However, it was not until Gabriele Fallopius in 1561 described erectile maintenance dysfunction in a patient with incurvature of the penis. In 1743, François Gigot de la Peyronie seminally described the disease process, depicting an indurated penis with curvature — "Induratio penis plastica". Peyronie began treatments of topical mercury and regular massaging of the plaque with Holy mineral water from Barèges. One hundred years later, Walsham and Spencer were the first to use mercury and iodine injections directly into the penile plaques attempting to dissolve them. This was immediately abandoned due to severe toxic side effects. In 1874, American physician, William Holme Van Buren recommended electrical current via diathermy and in 1943, American urologist Miley B Wesson reported having cured 2 patients via this technique over a 9-year treatment course. His patients would attach an electrode from a home diathermy machine to their penis and begin electrical therapy for 1 hour daily. Wesson also experimented with acidification to dissolve the plaques by prescribing oral disodium phosphate; however, no success was achieved with this option. Later in 1876, hyperthermia to the penile plaques was tested and found to soften plaques with multiple treatments. Over an 87-year period, a variety of oral and topical treatments were experimented with including: sulfur, copper sulfate, salicylates, estrogens, thiosinamin, acidification with disodium phosphate, arsenic, fibrinolysin, and milk. In 1922, German physician, Kumer reported the successful