

EXTREME UROLOGY

PRACTICE ON THE EDGE

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threaded to fit the plug



wooden plug

Extreme Urology: Practice on the Edge. Like Dr. Wirt Dakin in 1947 when he shared patients' stories in his infamous ***Urological Oddities***, we hope you find the stories contained here educational, as well as interesting. Urologists are in a unique position to hear the most intimate and private stories from their patients. Perhaps the stories told here provide an opportunity to challenge unexamined beliefs. Thanks to those who contributed to this project.

William Roman Aqueron, MD

Elayne Angel

Sanjeev Bandi, MD

Daniel A. Barocas, MD

Darren Beiko, MD

Melissa Brown, MD

Sakti Das, MD

Scott DeBoer, RN

Armen Dikranian, MD

Mark Edney, MD

Michael Fuoco, MD

Brent Gilbert, MD

Jennifer Gordetsky, MD

Martin Gross, MD

Judith Hagedorn, MD

Darren Katz, MD

Sushil Lacy, MD

Bob Lewis, MD

Richards Lyon, MD

Edna Maldonado

Johan Mattelaer, MD

Michael McCarthy, MD

Fritz Moll, MD

Hank Parfitt, MD

Sutchin Patel, MD

Matthew Peters, MD

Gregory Roberts, MD

Erwin Rugendorff, MD

Jim Sehn, MD

Kayla Smith, MD Candidate

Rodrigo Suarez, MD

William Roman Torreguitart, MD

Western Section, AUA

EXTREME UROLOGY

PRACTICE ON THE EDGE

Individuality promotes a person's innate desire to distinguish himself from his peers. But how does one achieve true individuality when the amalgamation of all the world's races makes it so that we are more similar to one another than we are different? In some ways, we feel a kinship with people who look and talk and laugh and think like we do. But in other ways, this feeling of homogeneity can be alarming. Does it mean that I, as an individual, am going to lose my identity? That I have no distinguishing feature that makes me unique?

Perhaps it is this uncertainty that has us exploring methods that some may perceive to be bizarre or extreme to ensure that no one person will ever truly be identical to another. And in today's world, finding ways to make us just a bit more distinctive is not difficult. Global barriers have all but disintegrated. Mobile devices and the World Wide Web grant us access to the furthest corners of the world. Without even a passport — with just the click of a mouse — you can explore indigenous cultures and imitate and integrate foreign practices into your own being. From the tattooed faces of the Maori to the beaded penises of the Japanese, the world really is your oyster — or maybe, more appropriately, your pearl? And if you do have a passport? On-the-ground exposure to the disparate practices of foreign cultures may recalibrate "normal" for the traveler. In fact, you may actually start questioning the banality of your own life. Barriers to other cultures and ways of living no longer exist.

From genital piercings and tattoos to the bloodied, mangled aftermath of a first-hand encounter with an improvised explosive device, the variables humans face are innumerable. More specifically, the factors — direct or indirect, self-inflicted or accidental — that affect the genitourinary system are themselves too great to count. And these factors, while they may vary in scope and degree of impact, will nonetheless be constant throughout human existence. As a result, today's urologist is forced to practice with a heightened sense of awareness and consciousness.

So no matter how seemingly bizarre or out of the ordinary a case may appear, you will likely approach a patient with not only your scientific medical mind, but also with your compassionate medical heart.

THE WORD "UROLOGY" ORIGINATES FROM THE GREEK WORDS "OURON" AND "-LOGIA," GENERALLY TRANSLATING TO "THE STUDY OF URINE." WHAT WE KNOW AND EXPERIENCE IN THE WORLD OF TODAY'S UROLOGY — FROM UROLOGIC TRAUMA TO SEXUAL PRACTICES TO BODY MODIFICATION — MAKES "THE STUDY OF URINE" SEEM ALMOST BANAL IN COMPARISON.

Although it was not until the American Urological Association (AUA) was formed in 1902 that urology began to be recognized as its own branch of medicine, practitioners have been treating medical conditions affecting the genitourinary tract for centuries. But the ailments that afflict man and the human curiosity that comes naturally with all things urologic remain constant. And it is this commonality between the past and the present and the desire to further explore the multifaceted field of urology that prompts the William P. Didusch Center for Urologic History to present ***Extreme Urology: Practice on the Edge.***

BODY MODIFICATION

A fundamental aspect of existentialism is that “existence precedes essence.” That is, the most critical aspect for an individual is that he is, in fact, an individual; he is unique, incomparable and independent. He does not neatly fit preconceived labels, categories or ideals. Soren Kierkegaard, one of the first existentialist philosophers, proposed that “it is the individual — not society or religion — that is responsible for giving meaning to life and living it passionately and sincerely.”

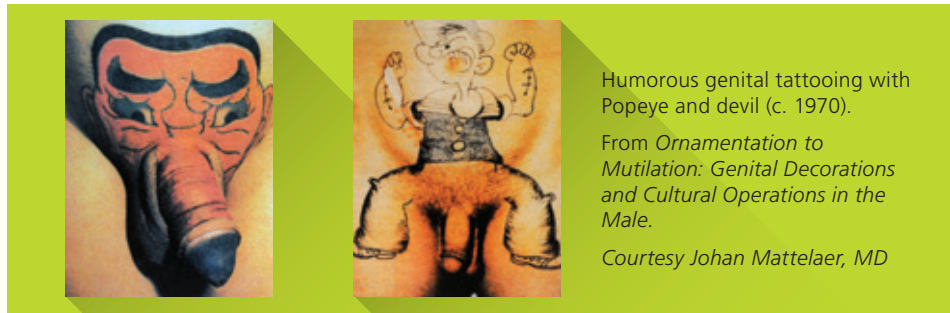
An individual’s desire to physically modify an aspect of his or her own genitalia is just one manner in which people have chosen to distinguish themselves from their peers. Body modification includes tattooing, piercings, augmentation, beading and subincision. Some of these practices may seem unusual, but as humans continue down the road of self-exploration, the boundaries of “normal” are continuously pushed, and the unusual becomes more commonplace.

TATTOOS

A tattoo is the (usually permanent) mark left by colored inks inserted into the dermis of the skin.¹ *Tatau* is Tahitian for “to beat wounds”² and designates this traditional act of body decoration on the islands of Polynesia.

There were originally four basic techniques for tattooing that existed throughout the world — the most common involved dipping a sharp-pointed instrument into a dye and then under the surface of the skin. Artists used materials available for their needles: gold in Egypt, bone or shell in the South Sea, ivory in Japan. The pain involved with the process depends upon the fineness of those needles. After Captain Cook discovered the tattooed natives of the South Pacific in 1776, his sailors brought this most exotic souvenir of their journeys back to Europe and North America, where it became popular among the working classes. In 1891, Samuel O’Reilly of New York built upon the technology of Thomas Edison’s autographic printing pen to patent the first tattooing device run by electricity.

Many cultures regard tattoos as protective amulets, and they are closely linked to religious beliefs; other cultures use the practice as a puberty initiation rite akin to circumcision. In cultures where nudity was common, tattoos performed



Humorous genital tattooing with Popeye and devil (c. 1970).

From *Ornamentation to Mutilation: Genital Decorations and Cultural Operations in the Male*.

Courtesy Johan Mattelaer, MD

the role that jewelry and lingerie perform in today’s American society. But in most societies, the genital tattoo is a symbol of love and sexuality (e.g., a girlfriend’s name or exploding dynamite). Genital tattoos are not as common and require a skilled artist and a stalwart client; but as the population increases and people hope to distinguish themselves from the masses, it is likely urologists will see more genital ink.

As with any tattoo, infection is always a risk; patients must be taught to keep the genital area clean. Patients could suffer some loss of sensation if the tattoo needles damage nerve endings, and priapism can result if the artery that carries blood away from the penis is damaged in the inking process.

URINE WAS SOMETIMES USED TO MIX THE COLORING
MATTER OF EARLY TATTOOS.³



Case: Genital Tattoo (late 1970s)

This patient was seen in my office for a routine urological examination of his prostate. I noticed an unusual tattoo — a ladder starting on his lower abdomen and creeping down to the base of the penis, at which point the ladder became a spiral surrounding the shaft of the penis and terminating on the glans. The glans was a solid color. Some of the spiral fanned out onto the scrotum, where the patient had a web covering the entire scrotal sac.

I asked the patient who had designed the tattoo, and he proudly responded, "I did."

When I asked who had performed the tattoo, he said that a tattoo specialist had done it.

"It must have hurt," I said.

"It did," he answered.

"How much did it cost?" I asked.

"It was expensive — \$1,000 — but the return has been fantastic! You have no idea."

Later I saw this same patient to remove some fat he had injected into his scrotum that had become lumpy and unattractive. He wanted it done without damage to his tattoo, which I was able to do.

*Rainer M. Engel, MD, FACS —
Key West, Florida*

Case: Genital Ink and Patient Privacy

As a young resident doctor was inserting a catheter, he noticed that his patient had a genital tattoo that read "joystick." The doctor quickly snapped a photo of the patient's tattooed genitalia with his cell phone. The surgery was successful, and the patient discharged. The doctor, however, began showing the "joystick" photo to his colleagues and even sent it via email to his girlfriend. His behavior ultimately resulted in a threatened hospital lawsuit, led to the termination from his residency and destroyed his future at that hospital.



Case: "For You"

A middle-aged male patient consulted to my service as a resident due to a penile lesion to rule out cancer. In effect, he clearly had the lesion, but also a message for all! In the glans??!! WOW! His lesion was managed with an excisional biopsy conservatively so as not to damage his art. He was an inmate at the time of biopsy and never came back. Diagnosis was negative for carcinoma; the pathologist called the lesion a giant verrucae.

*William Roman-Torreguitart, MD, FACS —
Mayaguez, Puerto Rico*

BODY MODIFICATION

PIERCINGS



An Ampalang, a short metal pin with a carved bone button at each end, for insertion through the penis horizontally. Dyak, Borneo.

Wellcome Library, London

The indigenous tribes of Borneo and the Philippines are believed to be the creators of the ampallang, a transverse piercing above the urethra and through the glans penis, which is maintained using a wide variety of implements: pig bristles, bamboo shavings, coral, broken glass and metal pins, usually made of gold or brass.^{4,5} The procedure itself is said to be relatively painless. Two slats are placed on either side of the penis — overlapping holes in each — then tightly secured. This reduces blood flow to the organ and, in combination with cold water, sufficiently numbs it so that it can be pierced through and then allowed to heal over the course of about one month.⁶

The precise origins of the ampallang are not known, though most Borneo tribes credit the Kayan — an inland tribe, thought to be the oldest among them — with starting the practice. The Kayan themselves believe that the piercing first came to be when a woman, dissatisfied with the size of her partner's penis, complained that it was no better than the rolled up leaves she used to satisfy herself. Insulted, he responded with the first ampallang, and from there, the practice spread to other tribes. This legend would explain why many anthropologists, such as the late Tom Harrison (1911-1976), describe the purpose of the piercing as being "to enlarge the diameter of the male organ inside the female ... to produce accentuated points of mobile friction, quite evidently giving a peculiar sort of sexual satisfaction to the female recipient." But the true purpose of the ampallang has remained a subject of debate. The barbed penises of rodents and rhinoceroses indigenous to Borneo may be the inspiration for the piercing, while early Spanish settlers of the Philippines believed it was an invention of the native women to prevent sodomy.⁷

It is unclear how often the practice takes place today, although the prevalence of the ampallang piercing has been markedly reduced in indigenous populations.⁸ This is most likely due to the influence of Christian

and Muslim missionaries in Borneo, who have significantly altered the indigenous cultural landscape over the past two centuries.⁹ In the Philippines, the practice was likely hindered in the wake of Spanish settlers, who vehemently opposed it as "a custom invented by the devil so that men may offend more with this vice our Lord God." According to the Boxer Codex — a Spanish manuscript from 1590 that contains descriptions and even illustrations of the indigenous peoples of the Philippines — those natives caught wearing the ampallang were punished with severe beatings.¹⁰

In the Western world, the infibulation is, historically, the most culturally significant genital piercing. It consisted of a piercing through the foreskin, through which a ring, barbell or even ligature could be threaded, completely covering the glans. The procedure itself is described in detail by the Roman writer Aulus Cornelius Celsus (25 BCE-50 CE) in *De Medicina*, who explains that the infibulation serves both "health" and "the voice." The piercing itself was thought to prevent intercourse — an activity that promoted the deepening of the voice, according to Aristotle — and thus, infibulation was practiced on choir boys. The poems of Marcus Valerius Martial also indicate that the piercing was worn by singers, musicians and actors to increase their sex appeal and better barter their sexual services on the side.¹¹

The popularity of the infibulation was such that rumors of the procedure made it all the way to India, where it became referenced in Mallanaga Vatsyayana's *Kama Sutra* sometime between the 2nd and 5th centuries AD. But the infibulation didn't regain much renown until the 18th century, when Johann Christoph Jaeger translated Celsus' piece on infibulation into German and further suggested that the procedure be used to prevent masturbation. From the 1700s through the 1900s, masturbation was considered to be a prime cause for insanity, as well as hundreds of other diseases; and in response, panicked parents and asylum staff concocted a number of ways to prevent the vice: chastity belts, metal cages and electrical alarms. Jaeger argued that infibulation was an excellent option, being relatively painless and easily performed. As early as the 1860s, it became popular in medical institutions throughout the United States — particularly in asylums — as a potential cure for mental disease; and in 1876, the prominent physician David Yellowlees presented his research on the subject at the quarterly meeting of the Medico-Psychological Association. At least 12 boys underwent the

CHANGE OF MIND: A PATIENT IN A CHARITY HOSPITAL HAD "NUHR FUR FREDA" (ONLY FOR FRIEDA) TATTOOED ON HIS PENIS. HIS WIFE'S NAME WAS ALICE.
— JAMES J. KING, MD, MILWAUKEE, WISCONSIN



Glans covers worn by the Dayak tribe of Borneo; the first includes the pin or nail used to perforate the glans. From *Ornamentation to Mutilation: Genital Decorations and Cultural Operations in the Male*.
 Courtesy Johan Mattelaer, MD

procedure; and in all but one case, due to irritation, positive results were reported. Afterwards, the report was re-printed in a number of high-end medical journals, encouraging the practice across the nation, but it largely went out of favor by the end of WWI.¹²

But with the exception of the ampallang and infibulation, genital piercing is largely a modern, Western phenomenon.¹³ Prior to the 1970s, body piercing as a whole was reserved for the fringe; but in 1975, Jim Ward — known as the “granddaddy of the modern body piercing movement” — started a piercing studio in his home called the “Gauntlet.” In 1978, he was able to open up a storefront in West Hollywood, creating the first commercial body piercing studio in the U.S. At that time, the body piercing industry did not exist, forcing Jim Ward to be innovative. He pioneered many modern piercing techniques and body jewelry designs, including the internally threaded barbell and fixed bead ring, which he had to make himself.¹⁴

As Jim Ward explains in his book, *Running the Gauntlet*:

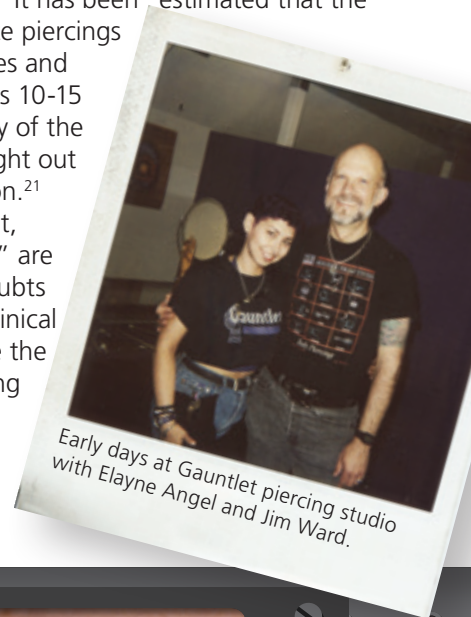
Consider tattooing for a moment. It's been around for thousands of years, but it wasn't until the invention of the electric tattoo machine in the late 1800s that tattooing began to spread across cultures and social classes. Something similar had to happen before body piercing could take root and truly flourish. First, there needed to be a universal language, a “menu,” if you will, of common piercing placements. Second, there needed to be a system of techniques that could be easily duplicated using readily available standard equipment and suitable jewelry. Gauntlet introduced all of these things.

Genital piercing, in particular, has become increasingly popular over the past few decades, with most national and international reports citing a prevalence of 1-3 percent.¹⁶ The reasons for piercing remain broad and varied, but are usually personal in nature. Sexual gratification, sexual expression and uniqueness are the most common.¹⁷ In women especially, genital piercings have been cited as a means of reclaiming one's body following sexual abuse and/or violence.¹⁸ No longer is the practice reserved to the “fringe” cultures of the body piercing and sadomasochism movements.

With genital piercing on the rise, it's not surprising that the practice has become safer in recent years, with patrons

more aware of the risks. The average age at which genital piercings are procured is 28 and, even then, only after more than a year of consideration. Yet complications do occur, including infection, allergic reaction, scarring, tearing, impotence, sterility, reduced sexual response, nerve damage, urinary diversion (in the case of a Prince Albert piercing), Fournier's gangrene and, in extremely rare cases, squamous cell carcinoma.^{19,20} It has been estimated that the complication rate for intimate piercings in general — both the nipples and genitals — may be as high as 10-15 percent. Yet the vast majority of the time, physicians are not sought out in the event of a complication.²¹ Instead, piercers, the Internet, friends and “common sense” are consulted, usually due to doubts concerning the physician's clinical knowledge, a desire to leave the piercing in and a fear of being criticized.²²

Kayla M. Smith, University of Maryland School of Medicine, MD Candidate, 2017



Early days at Gauntlet piercing studio with Elayne Angel and Jim Ward.



Case: Fisherman's Friend

While at the La Jolla VA Hospital, I was called to the ER. There was an elderly man with global aphasia (*couldn't talk or even wink in response to questions*). He had a piece of plastic pipe that went all the way through his glans penis. There was a metal hook attached to the midpoint of the pipe and exited the meatus. It was a simple matter to remove it. The consensus was that he was dropped off from some elder care facility and that this had been a mechanism by which his caregivers “controlled his movements.”

Michael McCarthy, MD — Carlsbad, California

BODY MODIFICATION

PENILE AUGMENTATION

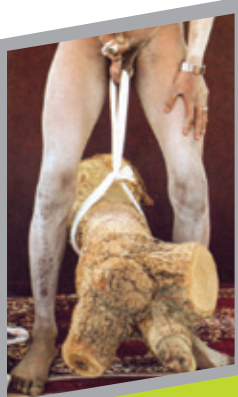
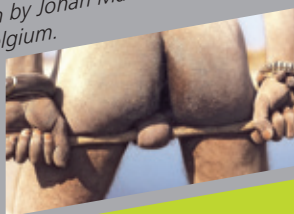
The male penis has defined masculinity through the ages and different cultures. Speaking about it was often taboo, socially unacceptable or the butt of jokes up to the 21st century. Penile length, girth and function, however, has been an issue for men throughout history; and penile enhancement today is a subject discussed not only in several subcultures but in public.²³

From a historical perspective, all methods and techniques to exaggerate male potency were of interest, including medication containing testicular extracts to the implantation of penile prostheses.

Even in the first book of the Bible, Genesis, when Abraham is told, 'Every male among you shall be circumcised,' we find the first hint of penile enhancement for religious reasons. The ancient Greeks were also fixated on the penis, as recorded by Kallixeinos of Rhodes in 275 BCE, who described a 'golden phallus, 180 feet long.' The phallus was topped with a golden star and carried through the streets during a festival in Alexandria, while people sang to it and recited poems.²⁴ In Egypt, men would hang weights from the ends of their penises in an effort to increase length. Arabic men taught their sons the art of *jelqing*. To "jelq" is to grasp one's semi-flaccid penis and slowly massage from base to tip repeatedly. If the massage resulted in an erection, the efforts would have to cease until the penis returned to its flaccid state and the massage would begin again. This was said to be successful in increasing not only length but also girth, with visible results within one month. The Chinese used various herbs to not only increase virility, but to increase the size of their penises. Yohimbe and ginseng were used back then and are still used today. In addition to these herbs, the consumption of animal testicles and penises were said to increase virility. In Borneo, men have even gone to the extent of inserting metal rods in their penises to maintain a permanent erection. Gradually, this practice acclaimed widespread popularity,

Sadhous in Allahabad during the 2013 Kumbh Mela, the greatest pilgrimage and festival in the Hindu religion.

Photos taken by Johan Mattelaer, MD, urologist, Belgium.



and men began piercing their privates to impress women. In Europe during the Renaissance, men did not have a way to increase the size of their penises so the fabulous art of compensation reared its ugly head in the form of the codpiece. Clearly, the idea of penis enlargement and enhancement is nothing new. On the contrary, it has been around since the beginning of mankind.

In 1917, Austrian doctor Otto Lederer²⁵ invented the first penis pump, designed to draw more blood into the penis in order to make it larger, both in length and girth. The device became widely popular throughout the country, as well as around the world.^{26,27} Following this invention, penile enhancement devices began to appear all over the world.²⁶

Penis enlargement operations have always been rather clandestine. In 1971, Kelley and Eraklis performed the first recorded penile augmentation for the treatment of microphallus in the pediatric population.²⁷ Aesthetic genital surgery for men has yet to gain widespread social acceptance; though with little effort, it could have a positive influence on the personalities and sexual sensibilities of patients and should perhaps be given a more prominent role in aesthetic surgery.

In addition to surgery, saline or silicone injections have become increasingly popular. The most common body parts inflated include the labia and breasts for females, and the scrotum and penis for males. Sexual stimulation is generally the motivation for those who participate in this form of body modification; the scrotum is usually the body part most treated. Due to the large number of nerve receptors in the scrotum, saline injections may enhance sexual stimulation and cause instant sexual gratification. Some males may also directly inject this solution into their testicles for similar purposes. Massive health problems due to silicone — known as "Silicone Embolism Syndrome," in which silicone escapes from the injection site and enters the bloodstream and eventually the lungs — have been reported. The symptoms are similar to those of pneumonia.²⁸

The American Urological Association (AUA) considers injection of fat cells for increasing penile girth to be a procedure that has not been shown to be safe or effective. Cutting of the suspensory ligament of the penis to increase penile length in adults is also considered neither safe nor effective.

Friedrich Moll, MD — Cologne, Germany

PEARLING

Pearling or genital beading is the practice of implanting foreign objects into the subcutaneous tissue of the penis, sometimes for aesthetic reasons and often for increasing sexual pleasure for both parties. Historically, genuine pearls were used (members of the Japanese mafia supposedly inserted one pearl under the skin of the penis to symbolize each year spent in jail), but modern implants are often made of silicone, nylon, Teflon, stainless steel and titanium. Modified household items, such as pushpins, dominos, marbles and ball bearings, have also been reported.³³

Implanted by a professional body-piercer using appropriate sterile equipment, beading is generally safe, though common side effects include inflammation, tenderness, redness and infection. When an inexperienced person places the beads improperly, the body can reject the bead: a bruise and blister forms above the bead, and eventually the implant pushes itself out of the skin. Scar tissue formation, which may cause chronic pain or erectile dysfunction, is also possible.³⁴

Pearling has gained increasing popularity in the U.S. prison system, where inmates, using rudimentary tools and with little or no knowledge of penile anatomy, attempt the procedure themselves. They often require surgical intervention.

Genital beading is prevalent in cultures around the globe. Whether for aesthetic reasons or sexual ones, pearling is another example of how people continue to push past what was once considered taboo.



Example of pearling.
Creative Commons,
Wiki



Case: Pearling: Leave it to the Professionals

A 19-year-old male inmate presented to our emergency department (ED) after attempting to purposefully cut the dorsal surface of his penis with an unused razor blade for self-performed "pearling." He made two horizontal incisions on the shaft — one proximal and close to the base of the penis, and one distal near the glans penis — approximately 6-7 hours prior to arrival at the ED. The patient alerted the prison staff after he noted worsening pain, swelling and ecchymosis to his penis, as well as a significant amount of blood when urinating.

His genitourinary exam revealed an uncircumcised penis with two horizontal lacerations on the dorsal shaft, one about 1.5 cm from the base of the penis and about 1 cm in width, and the other about 1 cm from the glans and about 1 cm wide. There was no active bleeding to the lacerations.

Per urological assessment, his marked penile ecchymosis and gross hematuria were suggestive of a hematoma and possible deep injury to the penis and/or urethra. The patient was given a tetanus shot and taken emergently to the operating room for penile exploration and repair.

In the operating room, the penis was degloved. It was found that the patient's two lacerations involved only the subcutaneous tissue and dartos fascia, without injury to Buck's fascia or to the tunica albuginea. A small subcutaneous hematoma was also evacuated from the proximal laceration. Irrigation of the wounds revealed several bleeding vessels within each wound, and they were cauterized with Bovie electrocautery. The postoperative diagnosis listed in the operative report was low velocity sharp penile injury.

When fully recovered, the patient was discharged back to law enforcement custody with instructions to remove the postoperative dressings the next day, and with five days of cephalexin and pain medication.³⁵

BODY MODIFICATION

SUBINCISION



Subincision of the penis is a urethotomy, in which the ventral surface of the penis is incised and the urethra is split open lengthwise along the raphe of the penis. Subincisions vary in size and can extend from the external urethral orifice of the glans penis to the scrotum.

Subincision is primarily practiced by Australian Aboriginals and was in practice before the European settlement. It is more commonly performed among tribes located in arid regions of Australia and within tribes that also perform circumcision. It serves as one component of the ritualistic rite of passage for Aboriginal youths and enables them to obtain higher social status within their communities. Traditionally, the ritual involves escorting a pubescent boy away from the tribe and laying him over the backs of Aboriginal men who kneel in a makeshift table. The boy is then stripped and held down on the backs of these men while the surgeon — usually a high-ranking tribesman — uses a scalpel made of emu bone or stone to make the incision. The wound is then held open on a piece of warmed rock or wood to widen the subincision. Sand, hot ash or animal fat is then placed on the edges of the wound to ease bleeding.²⁹ The blood obtained from the wound of a subincised penis is considered sacred to many Aboriginals, and the wound is commonly reopened during ritualistic bloodletting. Often performed prior to ceremonial dances, bloodletting allows blood to drip down the inner thighs of the dancers and is also used to anoint new initiates or other objects of ritualistic significance.³⁰

The reasoning behind ritualistic subincision is not well understood. Some authors suggest that the subincised penis is symbolic of the bifid kangaroo penis — a sacred animal that is a food resource and is also admired for its prolonged copulation ability. Others argue that subincision reflects feminization of the male genitals and that ritualistic bloodletting of the incised penis simulates menstrual bleeding. Subincision was commonly believed to be a rudimentary form of contraception, but this theory is heavily criticized since Aboriginals likely did not associate copulation with reproduction, and they generally believe that a subincised penis increases fertility, penile sensitivity and female partner satisfaction. From an evolutionary perspective, many have argued that the wider urethra and urinary stream achieved by subincision may have provided a hygienic advantage. On the other hand, subincision may have been an indirect method of population control for tribes exposed to harsh living conditions, as children of frail health would succumb to the wound incidentally through infection and poor nutrition.³¹

The practice of subincision has been documented in Aboriginals throughout Australia and is still practiced today in more remote Aboriginal communities. Both Europeans and Aboriginals criticize the practice; as a result, ceremonies are often performed under a shroud of secrecy and seclusion, and outsiders are almost exclusively never permitted. Consequently, subincision procedures today are usually performed without anesthetic, under unsterile conditions and using rudimentary surgical tools, such as razor blades or shards of glass, that pose a significant health risk for the Aboriginal youth.

*Sanjeev Bandi, MD, and Brent Gilbert, MD —
Queensland, Australia*



Adolescent boy undergoing subincision ritual.
Wellcome Images, London



Case: An Irishman in the Outback

An incontinent, moderately demented 93-year-old Irish missionary was referred from his nursing home for a catheter insertion to assist with long-term bladder management; a uridome was not suitable, as he was uncircumcised and had a wide urethral meatus. Upon close inspection of the glans penis, a subincision was noted on the ventral aspect of the glans penis. The subincision was 1.5 cm wide and extended 2-3 cm along the raphe of the penis from the tip of the glans to the coronal sulcus. The subincision wound was clean and showed neither signs of inflammation nor recent signs of excoriation. The patient complained of frequency, urgency and nocturia. Apart from this, the patient denied having dysuria, haematuria, difficulty emptying his bladder or straining; and his urinary output was adequate.

The patient had worked for more than 30 years as a missionary with aboriginal communities in central Australia and described how he acquired the subincision during a rite-of-passage ceremony approximately 60 years ago. He was held down on the backs of aboriginal men while another aboriginal elder used a flint stone to make the incision. The patient said these ceremonies were only performed on scorching hot days so the hot sand and dirt could be used to tamponade the wound, and he described how the blood from the wound was shared among the aboriginals, who ingested and spread the blood onto their bodies during the subincision ceremony.

It is possible that the subincision may have functionally contributed to the missionary's urinary incontinence. The subincised penis produces urine in a wide stream, which may exacerbate urinary symptoms, especially in the elderly population; and these men may be more prone to recurrent urinary tract infections. Given

the altered anatomy, care should be taken when placing a catheter in a subincised penis. Poor hygiene, abrasion against clothing and exposure to the elements in the outback in aboriginal populations with poor sanitation can result in secondary infections, scar tissue formation and urethral strictures.

Any event that results in inflammation of the urethra can cause a stricture. Interestingly, subincision was once thought to be a primitive operation that was performed to prevent urethral strictures. This may be true where the subincision extends the entire length of the penile urethra and is adequately splayed apart while the wound is left to heal. However, smaller subincisions, such as in our patient, may actually be more vulnerable to urethral stricture formation.

Further complications associated with poorly performed subincisions include infection leading to ascending urinary tract infections and sepsis, symptomatic blood loss, undesired penile disfigurement and urethrocutaneous fistulas. Subincisions may also obscure pre-existing hypospadias.

Subincisions typically don't have a direct impact on the ability to achieve an erection nor alter the quality of an erection. Erections are typically not painful in a subincised penis. Anecdotal evidence may suggest more pleasurable experience, as a greater number of nerve endings may be stimulated during intercourse with a subincised penis. As long as the urethra remains patent, there is no impact on a man's fertility. Men with subincisions are still prone to contracting sexually transmitted diseases and should still practice safe sex. To our knowledge, there is no literary evidence documenting a surgical correction of a subincision.³²

*Sanjeev Bandi, MD, and Brent Gilbert, MD —
Queensland, Australia*

SEXUAL PRACTICES

Urologists **KNOW** about sex. They can hardly escape the complicated physiological, psychological, societal, cultural and religious implications and inhibitions that affect sex and sexuality at any particular time or in any particular space. But even urologists can be surprised and perhaps even confounded by some sexual practices that present in their offices and in literature.

SOUNDING

It is not unusual for a urologist — cystoscope in hand — to be confronted with a foreign body that has been inserted into the urethra and, sometimes, lost inside the bladder! In some cases, symptoms may not present for years; and in others, the damage can be quick and severe, leading to urethritis, hematuria, urinary tract infection, acute cystitis and urinary retention. In rare cases, anti-peristaltic action can allow small, thin objects — such as straw and cat hair — to be pushed up the urinary tract, into a ureter, and eventually into the ureteropelvic junction of the kidney. In such cases, flank pain, fever and general malaise occur, often concurrent with infection and possible septicemia.³⁶ An entire arsenal of treatment options, medical expertise and creativity are needed to remove the foreign bodies — which can range from pens and pencils to knotted wire, paraffin crayons and live animals. But what compels a person to intentionally insert foreign bodies into the genitourinary tract?^{37,38}

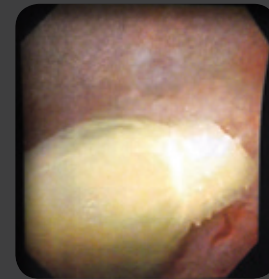
The motivations behind insertion are many and just as variable as the foreign bodies themselves. Chewing gum and candle grease are commonly inserted into the male urethra as a means of contraception. In one instance, a patient inserted a dry haricot bean into his urethra as a means to prevent incontinence using the ball valve technique. Mental illness has also been implicated in foreign body insertion, particularly mental retardation, obsessive compulsive disorder and borderline personality disorder. In some patients, particularly prisoners and mental patients, self-insertion has been used to garner attention or move units, while in others, it has been used as a form of personal punishment and a means to commit suicide.

In children, the insertion of foreign bodies is usually

associated with curiosity, but as the Internet has become more accessible to younger individuals, imitation of adult behaviors has also played a role.^{39,40,41}

Yet the most common reason for self-insertion is erotic in nature — allowing for urethral stimulation during masturbatory practices — and thus, the practice often develops into a life-long habit.^{42,43} Those who use household items for urethral stimulation are, therefore, at high risk for losing the foreign bodies inside themselves and for all the associated complications. Unfortunately, the shame and humiliation prevent many from visiting a urologist until years have passed and unbearable symptoms have developed. For this reason, “sounds” have become popular among those who enjoy urethral stimulation. Historically, “sounding” has been used to dilate urethral strictures, but in recent years, sounds have become a commercially available sex toy used for urethral “play.”⁴⁴ This allows one to participate in a relatively safe manner, although damage to the urethral mucosa, urinary tract infections and prostatitis are still considerable risks.⁴⁵

Kayla M. Smith, University of Maryland School of Medicine, MD Candidate, 2017



Case: Pickled

A 37-year-old footballer was brought in to the hospital in the early hours of the morning after a “Mad Monday gone wrong” after winning the Grand Final. He gave a history of passing an object intraurethraly in a dare but was not sure what the object was. He was fairly intoxicated and stuporous, and informed consent had to be obtained from his wife and carer. A flexible cystoscopy was performed, as he had some blood at the meatus and access to radiology was not available.

The unknown object turned out to be a “gherkin” or pickled cucumber. The object was too large to remove transurethraly with a flexible cystoscope. The flexible cystoscopy confirmed urethral patency with some trauma to urethral mucosa; and after passing a guidewire under vision into the bladder, an 18Fr silkatic IDC was inserted to enable bladder drainage until the patient was medically fit to have a rigid cystoscopy under anaesthesia. The “gherkin” was able to be sliced into smaller pieces with a resectoscope and removed successfully transurethraly.

*Sanjeev Bandi, MD
Queensland, Australia*

HISTORICALLY, “SOUNDING” HAS BEEN USED TO DILATE URETHRAL STRICTURES; BUT IN RECENT YEARS, SOUNDS HAVE BECOME A COMMERCIALY AVAILABLE SEX TOY USED FOR URETHRAL “PLAY.”

HISTORY OF FOREIGN BODIES IN THE GENITOURINARY SYSTEM

There are illustrated cases of foreign bodies inserted into the penis itself or the urethra from at least the 6th century on. Gauthier describes a foreign body applied to the penis in 1755, and Denucé presented 391 cases in 1856. Monton reviewed the literature and found 455 reports and articles in 1916. Almost all societies, every continent, and all genders and ages are included.⁴⁶

In one of the oddest textbooks of urology that has ever been published, one must rank Wirt Bradley Dakin's *Urological Oddities* as one of the most peculiar. He alerts the reader, "All of this material was generously contributed by surgeons and physicians from nearly every country in the world for a period of fifteen years." This would certainly indicate the magnitude of this problem since it is a snapshot of only a brief period of time. Dakin begins chapter four ominously with his title, *Foreign Bodies in the Bladder, Autoeroticism*. He presents 212 cases of these foreign objects within the urinary bladder.⁴⁷

New York State was the most represented populace in this bizarre collection of bladder foreign bodies. There were 35 states and the District of Columbia represented, showing a broad area of those afflicted with the desire to insert things into themselves. There were also cases from Canada, England and New Zealand, with a total of 111 identified male subjects, 61 females and only 40 where the gender was not indicated. Every ethnicity was noted except the Inuits or Eskimos (but three Native Americans were included). Ages ranged from four-year-olds to 76 years.

Objects du jour

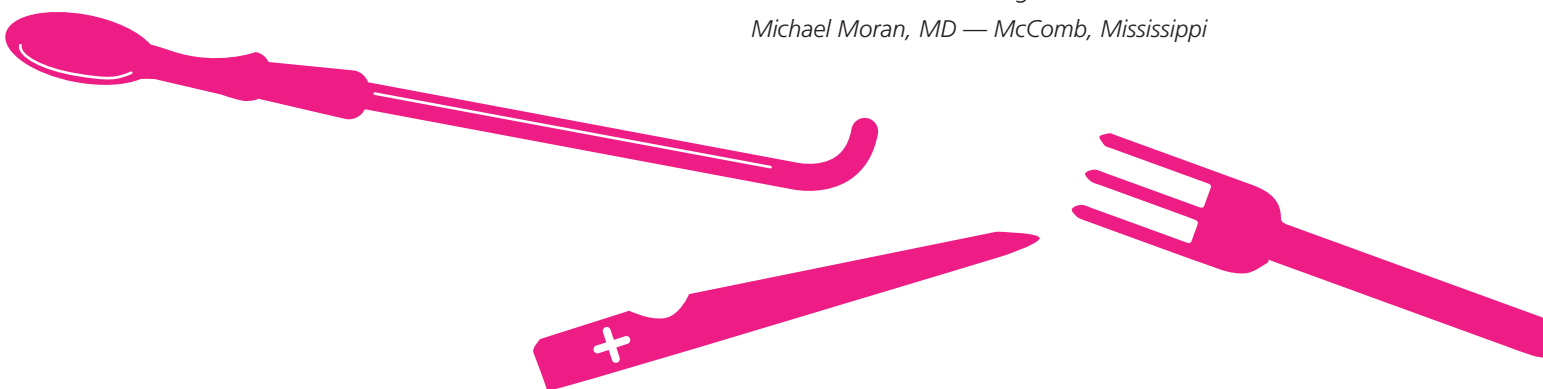
- chewing gum (there was no mention of flavors but "spearmint" odors were mentioned)
- bobby pins or hair pins
- glass rods
- thermometers
- slippery elm and other wood pieces
- crayons and candles
- gold watch chains

Some of the more esoteric items with only a single reported case: a nail file; squirrel's tail; squirrel's penis; earthworm; snake (without head); hog's penis; two snails; a windshield wiper blade; a French fry; 16 gms of carrots; a baby's rattle; and finally a fetal skeleton. Then there are items for which the volume of material inserted was exceptional: a whole tureen of gravy (coagulated and crystallized); 24 inches of radio wire; three-foot-long leather and metal belt; 18 feet of fishing line (the resulting stone was the size of a baseball); six feet of 26 gauge wire; a three-foot shoelace; 13 ½ feet of string; and a six mm, 109.5 cm long rubber tube.

Though Dakin was certainly not the first medical author to discuss the bizarre practice of introducing a foreign object into one's own urinary bladder, he certainly was the most graphic. In fact, the tradition that he started of highlighting "urologic oddities" has continued at the Annual Meetings of the AUA Western Section as the *Round Table Forum*.

Cystoscopic methods predominated for management in Dakin's era but open removal was often necessary. Today, a wide range of minimally invasive methods can be used for these rare, "extreme" cases. Percutaneous suprapubic approaches and both laparoscopic and robotic methods to deal with bladder foreign bodies have been described.

Michael Moran, MD — McComb, Mississippi



SEXUAL PRACTICES



Case: Write ON!

A marine accountant showed up in our clinic with microhematuria and dysuria. My partner did a urethrogram that showed a metallic foreign body in the bulbous urethra. He scoped the patient and saw what looked like the working end of a pen. My partner scheduled him for an exam with me under anesthesia and cystoscopic extraction. The morning of the surgery, my intern showed me the films and asked about the whiteness above the symphysis pubis. I told him it was probably just some white-out at the very top of the film but advised him to take a higher KUB to prove that. That film revealed a large bladder stone around a foreign body. I had to actually ratchet the bladder in the mid line in order to extract the accounting pen with the stone around it that was firmly wedged against the back wall of the bladder with the other end stuck in the urethra. The point I remember is that the pen still worked, and we called this case "the case of the Bic that could take a lick and keep on coming."

Michael McCarthy, MD — Carlsbad, California



Case: The Sword in the Stone: EXCALIBUR

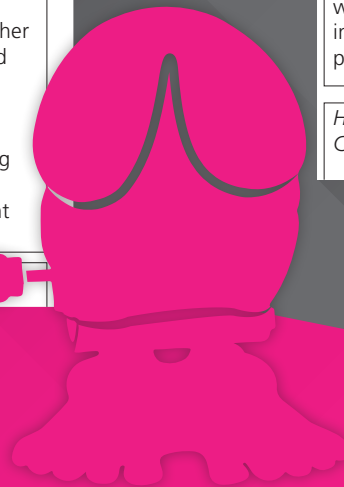
The patient was a 22-year-old male who presented to the emergency room (ER) on New Year's Eve with a history of intermittent hematuria. On physical exam, the ER physician noted a "rock-hard prostate." The urologic consultant obtained additional history from the patient, who reluctantly told him that he had been drinking heavily at a New Year's Eve party one year previous, and "an angry ex-girlfriend put a thermometer in my penis while I was passed out." On repeat rectal exam, the urologist determined that the hard object was above the patient's small prostate, probably within the bladder. KUB showed a thermometer and a large stone in the lower pelvis. The patient was prepped and taken to the operating room, where cystoscopy confirmed the diagnosis. The thermometer, encased in a large stone, was removed through a suprapubic incision. Recovery was uneventful, and the patient was lost to follow-up.

Henry E. Parfitt, MD — Fayetteville, North Carolina

Case: The Case of the Missing Vibrator

A 25-year-old female consulted from the emergency department (ED) for vaginal discharge and increasingly foul, generalized body odor. The patient denied fever, chills, open sores or other symptoms. After extensive questioning, the patient reported placing a foreign object in her vagina seven years prior to evaluation. The patient revealed that she had not removed the foreign object placed in her body years ago. A pelvic MRI revealed a foreign body with metal components causing extensive vesicovaginal fistula. Removal of the foreign body revealed a "hopping wind-up penis." The patient underwent vesicovaginal fistula repair with flap with recurrence.

Melissa Brown, MD — Aberdeen, South Dakota





Case: Diamonds: Not Just a Girl's Best Friend

The patient is a 43-year-old man who presented to the emergency room complaining of dysuria. Upon further questioning, he admitted having placed a foreign body into his urethra. He was afebrile and hemodynamically stable. He was taken to the operating room for cystoscopic removal of the foreign body. To our surprise, we found a diamond engagement ring that was bent to fit the urethra. We were able to remove the ring, together with several other objects, endoscopically. Over the course of 1 ½ years, the patient has visited the emergency room eight times, had five trips to the operating room and had a total of 18 objects removed from his urethra and bladder. These included (among other items) the precious diamond ring, a metal cross pendant, the tip of a nail file, the zipper pull of his wife's wallet, a metal nail, a hair pin, a tip and spring of a pen, a T-shaped screw, a zipper pull, the tip of a hair mousse bottle and the cartridge of a highlighter. Surprisingly, his urethra has remained cystoscopically free of strictures. Of note, despite psychiatric evaluation and treatment, the patient continued to self-mutilate and was diagnosed with psychosis not otherwise specified.

Judith C. Hagedorn, MD — Stanford, California



Case: Lights Out

A twenty-three year old white male was seen relative to dysuria, urgency, urgency incontinence and bilateral flank pain of approximately 72 hours duration. The patient denied previous urinary tract problems. In addition, he denied any self-instrumentation with foreign bodies. At the time of examination, the patient was febrile with a temperature of 103° rectally.

Intravenous pyelogram revealed evidence of a large bladder calculus with a nidus of apparent wire, which extended into the urethra to a point 3 – 4 CM from the urethral meatus. Dilatation of the kidney pelvis, calyces and ureters was evident. Initial urinalysis revealed evidence of pyuria and hematuria; subsequent culture revealed greater than 100,000 organisms/cc of *Proteus mirabilis*. The patient was subsequently taken to the operating room where a cystolithotomy was performed. Post-operative convalescence was uneventful. The calculus measured 3 x 5 x 3 cm and weighed 32 grams (1.1 oz). The protruding wire measured 16 cm.

Robert Lewis, MD — Plain City, Ohio



Case: Repeat Offender

A 32-year-old incarcerated Caucasian male recently presented to the emergency room (ER) with his fourth foreign body insertion over the past six months. He had no previous psychiatry consultation and no input from prison officials. He was suicidal and, in fact, had attempted suicide many times with one attempt at self-immolation. He was angry, hostile and threatening to all around him and admitted to placing a plastic fork up his penis, rendering him unable to void. A CT scan showed a foreign body in his rectum, another within his bladder: a 4 cm screw. He had on all previous presentations caused quite the commotion in the ER, the operating room and on the floor; in fact, he was somewhat of a celebrity at the hospital. He was moderately isolated at his institution, but since he has been coming to the hospital, two others have presented. This is widely recognized as a socio-inductive behavior that perpetuates this behavior at violent institutions. Complaints to the prison when this patient threatened physical harm to others at the hospital finally involved prison authorities, solving this individual's problems and preventing imitators.

Michael Moran, MD — McComb, Mississippi

UROLOGIC TRAUMA

At times, urologic trauma is intentional and/or self-inflicted, and at times, it is accidental. The AUA's *Urotrauma Guidelines* and the European Association of Urology's *Guidelines on Urological Trauma* illustrate a growing interest in urologic trauma. Genital traumatic injuries include both urinary tract injuries and injury to the sexual apparatus (and therefore sexual function). The field of genital reconstruction centers on long-term, functional outcomes.

Regardless of the origin of the trauma, diagnosing the injury can be difficult but critical to appropriate and timely treatment. From combat-related injuries to penile amputation, and from accidents, bites and stings to diseases and entrapment, there are a number of conditions a urologist should be prepared to address when presented with the "out-of-the-ordinary."

According to the World Health Organization, trauma accounts for 16,000 deaths worldwide each year and 16 percent of the global burden of disease. Urotrauma does not discriminate, but men are more prone to injury than women. And while all organs of the genitourinary tract are susceptible to injury, renal trauma is the most common.⁴⁸

Trauma to the urologic tract is not always obvious at the time of injury. Often, a thorough examination is needed before a provider can assess and begin to manage damage to the kidneys, bladder, urethra and external genitalia.

COMBAT-RELATED

Urotrauma includes any damage to the urinary tract or reproductive organs from a penetrating, blunt, blast, thermal, chemical or biological cause.

—Mark Edney, MD, Urologist and Operation Iraqi Freedom Veteran

The word "extreme" can often connote danger. And what is more dangerous than being in the middle of a combat zone with enemies on all sides and the knowledge that the next step forward may be your last? And if not your last, it may still be a step that leads to unquantifiable pain and trauma. As the conflicts in Iraq and Afghanistan persist, so do the mental and physical wounds experienced by veterans of Operation Enduring Freedom, Operation Iraqi Freedom and Operation New Dawn (OEF/OIF/OND). Research indicates that veterans of OEF/OIF/OND are most often afflicted with musculoskeletal and connective system diseases and mental health disorders.⁴⁹ And while awareness campaigns often focus on these afflictions, it should not be disregarded that urotrauma accounts for a significant 12 percent of combat-related injuries.

Psychological and physical scars of urotrauma can be severe, and one of the AUA's legislative priorities is to advance urotrauma legislation and resources for veterans and service members. For soldiers injured by improvised explosive devices (IEDs), injuries range from loss of genitalia to infertility and incontinence.

In every war, soldiers suffer urologic injuries, but the types of injuries and treatments change as warfare itself changes. Death was the typical result of the Civil War's penetrating Minié ball for soldiers with abdominal and kidney injuries and pelvic wounds involving

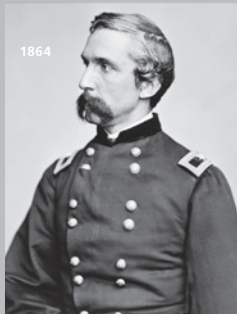


A – genital trauma from IED.
B – sponge dressing placement for staged management of genital soft tissue loss.

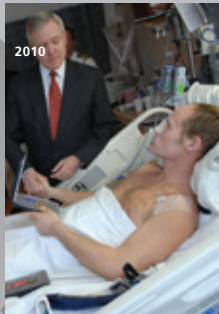
C – completed placement of vacuum assisted closure device.

From Operative Management of Wartime Genitourinary Injuries at Balad Air Force Theater Hospital, 2005 to 2008, Steven J. Hudak, Samuel Hakim; *The Journal of Urology*, Volume 182, Issue 1, Pages 180-183 (July 2009)

THEN AND NOW



1864



2010

In **1864**, Maj. General Joshua Lawrence Chamberlain was shot with a Minié ball that coursed through his pelvis, rupturing his urethra and bladder. Though expected to die, the Civil War soldier did survive his injury, but only because his brother recruited two surgeons to treat his injury in the field hospital. But Maj. General Chamberlain was plagued with constant pain, incontinence, impotence, cystitis, epididymo-orchitis and osteomyelitis for the rest of his life. According to his death certificate, he died at age 85 of bacteremia, probably secondary to a urinary tract infection.⁵⁰

In **2010**, Navy Seal Lt. Dan Clossen stepped on an improvised explosive device (IED) that fractured his pelvis and injured his bladder, urethra, scrotum, testicles and rectum. Lt. Clossen survived more than 30 surgeries at Walter Reed National Military Medical Center. Though he lives with catheters and a colostomy bag, his body continues to produce sperm, allowing him to have children if he chooses. Unlike Lt. Clossen, many wounded warriors end up infertile as a result of urotrauma.⁵¹

the bladder and rectum. Today, explosive weapons such as IEDs account for most modern battlefield urologic injuries — injuries that may be less deadly but are often more complex than bullet wounds. Physically and psychologically debilitating, urologic injuries can affect the soldier's sexual function, fertility and ability to urinate for the rest of his or her life.

On the battlefield, urologic injuries are almost always initially missed since the trauma is rarely limited to the genitourinary system, and a thorough urologic evaluation is impossible. Over time, the period from field injury to surgical treatment has significantly decreased — from 16 hours in WWII to less than one hour in Vietnam. Whereas the Civil War's Jonathan Letterman, medical director for the Union Army, had to create a horse-drawn ambulance corps to get the wounded to rudimentary field hospitals, later war surgeons used trucks and then helicopters to transport soldiers to combat support hospitals that stabilize casualties before evacuation to regional hospitals. This shorter evacuation time and earlier surgical intervention seems to have diminished the death rate from battlefield urologic injuries.

Kevlar body armor has also reduced the incidence of battlefield abdominal urologic injuries, but a groin-protective Kevlar piece, also issued to soldiers, is large and cumbersome and restricts the soldier's movements so much that few soldiers use it.

While modern medicine has decreased the mortality rate among wounded warriors, the need for awareness, compassion, education and legislation should only increase to ensure that our soldiers receive the best care possible.

It's important to understand the breadth of genitourinary injuries that result in threats to fertility and sexual function. The most common cause of urotrauma injuries are blasts from improvised explosive devices (IEDs) and gunshot wounds that can result in testicular rupture and injuries to the penis, urethra and bladder. More than one type of genitourinary injury is common for the soldier on foot patrol who experiences an IED blast. Non-urologic injuries can also affect urologic function. Spinal cord or traumatic brain injury (two major classes of non-urological injury) can result in ejaculatory dysfunction that can impede fertility.

Urotrauma is not unique to male soldiers. Blast or gunshot wounds to the female pelvis can also result in a variety of injuries that impair sexual function and fertility. Trauma to the perineum and vagina can easily result in sexual dysfunction. Additionally, penetrating shrapnel injury to the female pelvis can disrupt the ovaries, fallopian tubes or body of the uterus. Fallopian tube injuries can preclude the normal passage of the egg and therefore prevent fertilization. Uterine injury can result in a uterus incapable of sustaining a pregnancy.

—From Dr. Mark Edney's Op Ed piece: *Genitourinary War Injuries Getting Increasing Attention on Capitol Hill*



PENILE AMPUTATION: ETIOLOGIES AND INFAMOUS CASES

As seen in combat-related injuries, urotrauma can impact the entire genitourinary tract. It can also focus on one specific area, such as the penis, as is seen in cases of penile amputation.

In ancient times, the removal of the penis (penectomy) was used to demonstrate superiority over an enemy, and armies were sometimes known to sever the penises of their enemies to count the dead. In some cases, the practice of castration to create a class of servants (eunuchs) also involved removal of all or part of the penis. In ancient China, removal of a man's penis was punishment for crimes such as adultery. As one of the "Five Punishments," a penectomy could be legally performed on criminals in China. A male offender was often castrated, suffered penis removal and sentenced to work in the palace as a eunuch.

Penile amputations are performed for medical reasons, as in the case of penile carcinoma. Botched childhood circumcisions have also resulted in complete or partial penectomies. Current-day etiologies for penile amputation can be categorized as a result of self-mutilation in psychiatric patients, accident/work place injury, circumcision complication, sexual assault, and as surgical treatment for carcinoma.⁵²

NAPOLEON'S PENIS

The story of the amputation of Napoleon Bonaparte's penis is one of the most famous stories of a penectomy performed post-mortem. At his autopsy in 1821, Bonaparte's penis was removed by his physician because he had been left out of Napoleon's will. It stayed with his chaplain, Ange Paul Vignali, and was passed between two different collectors until the Vignali Collection was sold in 1978, at which time the famed urologist John Kingsley Lattimer purchased it.⁵³

EPIDEMIC OF PENECTOMIES IN THAILAND

One of the largest "epidemics" of penectomies occurred in Thailand between 1973 and 1980, when 100 cases of Thai women cutting off their husbands' penises were reported. The "epidemic" was due to the prevalent practice of Thai men keeping mistresses as sexual partners and was further fueled by graphic press reports and at least one series of interviews with prominent Thai women who, almost unanimously, stated that they endorsed this method of retribution.^{54,55}

Dr. Bhangnada and colleagues published "Surgical Management of an Epidemic of Penile Amputations in Siam" in 1983, which contained the paragraph:

It became fashionable in the decade after 1970 for the humiliated Thai wife to wait until her husband fell asleep so that she could quickly sever his penis with a kitchen knife. A traditional Thai home is elevated on pilings and the windows are open to allow for ventilation. The area under the house is the home of the family pigs, chickens and ducks. Thus, it is quite usual that an amputated penis is tossed out of an open window, where it may be captured by a duck.

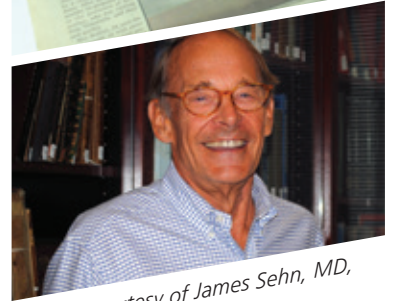
The Thai saying "I better get home or the ducks will have something to eat" is a common joke and immediately understood at all levels of society.⁵⁶

A considerable amount of expertise in managing penile amputations therefore evolved throughout the medical centers in the region; it was soon recognized that the optimal treatment of these patients would require microsurgical technique.

The authors comment that "none of the patients filed a criminal complaint against their attackers." Authors of a study exploring the factors associated with penile amputation in Thailand interviewed three couples who were part of the epidemic (the couples by then had divorced). They discovered that three factors were present during the week prior to dismemberment: 1) there was a financial crisis; 2) the husband had ingested drugs or alcohol immediately prior to the event; and 3) the public humiliation of the wife, owing to the presence of the husband's mistress.⁵⁷

THE BOBBITTS

The case of John and Lorena Bobbitt gained worldwide notoriety in 1993. The Bobbitts' abusive relationship culminated with the event on the night of June 23, 1993, when Lorena dismembered John's penis with a knife while he slept. After assaulting John, Lorena left the apartment with the severed penis and threw it out of her car into a field. After realizing the severity of the incident, she called the police. The amputated penis was located and brought to the hospital, where a penile replantation was performed by urologic surgeon James Sehn, MD, and plastic surgeon David Berman, MD.⁵⁸



Photos courtesy of James Sehn, MD, Urologist



BOBBITT SURGERY — JUNE 23, 1993

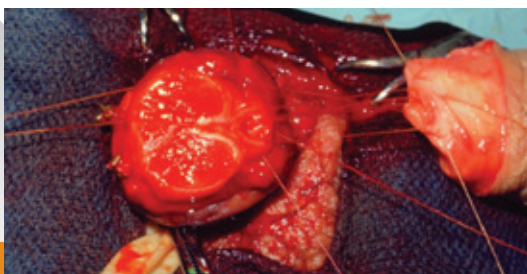
By: James Sehn, MD — Manassas, Virginia

Penile amputation is fortunately a rare urological emergency that will ultimately require the skill of a microvascular surgeon for successful replantation. Urologists, however, will inevitably be the first called to the emergency department, so it's good to have a game plan in mind in case such a call should come your way. It's a horrific sight, but stabilizing the patient requires nothing more than a Penrose drain for tourniquet and Kelly clamp. If the organ is missing in action, a perineal urethrostomy will close the case. Bobbitt's cleanly amputated penis was returned to the ER shortly after the police found it in a field where his wife Lorena had tossed it. Conveniently located in front of a 7-11, the clean-cut organ was placed in a hot dog bag on ice and brought by EMS to the ER.

I was fortunate to enlist Dr. David Berman, recently graduated from a microvascular fellowship in Montreal, to join me. We sat down with the operating microscope for what was to be an all-day, nine-hour case. The first part of the exercise was identifying the important structures on either side of the mirror image before us and tagging each vessel and nerve so they could readily be found again in the limited field of changing view under the scope. We then began closing ventrally with a spatulated anastomosis

of the urethra over a silastic catheter. Dorsal arteries and nerves were approximated and — most importantly — the deep dorsal vein to avoid venous congestion. Corporal arteries probably don't need to be addressed. It was very gratifying to see the glans pink up with the release of the tourniquet. In the post-op period, reflex neurogenic erections were noted about the catheter. No voiding problems were encountered.

I was astounded after the case to be met by reporters from *The Washington Post* before I had even eaten, and the replantation story seemed to take on a surreal life of its own in the media. Cultural issues revolving about the age-old battle of the sexes and emasculation were freely aired. Questions about function were answered by NPT testing and ultimately by porn films, which grossed millions of dollars for the entertainment lawyers who managed Bobbitt. Little-known is the fact that Bobbitt's hospital and surgical bills were never paid and were eliminated by his lawyers, who took him to Chapter 11 bankruptcy after his discharge from the hospital. All in all, it was an opportunity for me to relate to the public the advances in replantation surgery and to make the point that every day we surgeons care for cases such as this, often without hope of any compensation.



PENILE REPLANTATION

Penile replantation was first reported by Ehrich in 1929, when he realigned penile structures without anastomosing the blood vessels or nerves.⁵⁹ In 1977, Cohen and colleagues reported the first microvascular replantation of an amputated penis.⁶⁰ Because of how rare penile amputations are, surgical management for this injury has evolved slowly based on few case reports and small series. Factors that contribute to a successful penile replantation include the degree of injury, type of injury (crush, laceration, incision), warm ischemia time, use of microvascular technique and experience of the operative team.⁶¹ A plastic surgeon is generally consulted to aid with microsurgical reanastomosis of the dorsal structures when the urologist is not trained in these techniques. In some cases, other specialists may be required; a gastroenterologist was required to endoscopically retrieve the amputated penis in a case where the penis was swallowed following amputation.⁶² Self-mutilation of external genitalia in psychiatric patients is known as Klingsor syndrome. This case also illustrates the need for a psychiatry consultation in patients with a history of psychiatric disorders and to aid in delineation possible underlying psychiatric disease in the etiology of self-amputation.^{63,64}

Management of penile amputation begins with resuscitation and stabilization of the patient. For organ preservation, the amputated penis is wrapped in saline-soaked gauze and placed inside a sterile plastic bag, which is then placed inside a second container with ice slush. The amputated penis is then generally washed and irrigated with saline and antibiotic solution prior to replantation.

Debridement of nonviable tissue is performed to allow clear identification of the veins, nerves and arteries. Current techniques emphasize microsurgical repair (either with a urologist trained in microsurgical surgery or with a plastic surgeon) to achieve the best results. The urethra is reconstructed first, and a Foley catheter is placed to stabilize the repair. The bodies of the corpus spongiosum are reapproximated next, followed by reapproximation of the cavernosal bodies with interrupted suture. Microsurgical end-to-end anastomosis of the dorsal penile artery is performed, followed by microsurgical anastomosis of the two dorsal veins and dorsal nerves.⁶⁵

At the completion of replantation, revascularization is checked. Distal penis color and the use of Doppler ultrasonography are used to monitor vascularity. Venous outflow is a critical factor for success of replantation. In cases where restoration of venous drainage is impaired, a spongiosocavernosal shunt has been used in patients whose dorsal vein was severely injured. Leech therapy has also been described as a means of relieving venous congestion post-operatively in cases of penile amputation and in both plastic and reconstructive literature.^{66,67}

In cases where the patient presents without the amputated penis, hemostasis is first achieved and the decision of how to close the penis has to be made. If the erectile bodies are intact and only the skin has been degloved, a split thickness skin graft can be used. Total phallic reconstruction has been described after penile amputation for carcinoma. The first total phallic reconstruction was attempted in 1936 by Bogoras, who used a random pedicled oblique abdominal singular tube with no incorporated neourethra. Phallic rigidity was obtained by inserting rib cartilage inside the flap. Most early methods of penile reconstruction involved the use of abdominal flaps. With the advent of microsurgical techniques, the use of the radial-artery free flap was used for phalloplasty. First described by Song and colleagues in 1982, multiple studies have described the technique involving the creation of a "tube within a tube," using forearm skin with the urethra fashioned from the non-hair-bearing area with the flap.⁶⁸ The radial-artery free flap is based on the radial artery, the venous drainage based on the cephalic vein and sensation of the flap provided by the medial and lateral cutaneous nerves of the forearm. A three-piece inflatable penile prosthesis is inserted to allow for erectile functionality. As in all major phalloplasty surgery, complication rates are high, and one main drawback of the technique is the donor-site morbidity.⁶⁹

The first case of penile transplantation was reported in 2006 in China,⁷⁰ however surgeons had to remove the penis two weeks later due to "a severe psychological problem [between] the recipient and his wife." The case brings to light the many ethical issues involved, especially pertaining to the graft donor.⁷¹ In December 2014, the first successful penis transplantation was performed in South Africa on a 21-year-old male who had lost his penis during a botched ritual circumcision when he was a teenager.

Sutchin R. Patel, MD — Lake Forest, Illinois

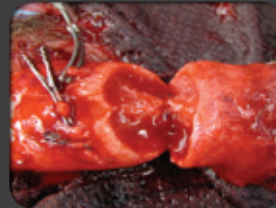


Case: Case of Self-Amputation

A divorced, 74-year-old, born-again Christian was enrolled in an androgen replacement therapy clinical trial and presented for a routine follow-up appointment for the clinical trial. He was enrolled in the clinical trial for three months and randomly assigned to the dehydroepiandrosterone (DHEA) arm of the study. He was being treated with DHEA 50 mg orally, twice daily. He revealed a recent act of penile self-mutilation to the research associate, who promptly sent him to the emergency department for surgical and psychiatric assessment.

The patient was assessed at the emergency department seven days after self-amputation of his penis. He had a vivid and descriptive recollection of the act. In an attempt to maintain the sterility of his implements, he boiled his tools. He placed a metal clamp on the base of the shaft of his penis to prevent excessive bleeding. He poured bleach over a wooden block and covered it with a layer of antiseptic baby wipes. He placed his penis on the block and used three blows with a sterilized wood chisel to cut off his glans penis. He then used a boiled needle and cotton thread to sew the wound closed, leaving a small area open so that he could void. The glans was buried at an undisclosed location. Despite severe pain with urination over the next few days, he did not seek medical attention until one week later, after he had removed the stitches and the wound opened up on him.

Kirk Roth, MD; Jason Izard, MD; Darren Beiko, MD, Self-performed glansectomy and surgical repair by a nonpsychotic patient on androgen replacement therapy, CUAJ • August 2009 • Vol.3, Issue 4)



Case: Eat This, Not That!

In January 2011, a 51-year-old paranoid schizophrenic presented to the emergency department in Kelowna, British Columbia, with a self-inflicted penile amputation. It was revealed that the patient had swallowed his amputated penis. Within roughly one hour of ingestion, the gastroenterology service performed endoscopic retrieval of the penis from the patient's stomach. Careful examination of the amputated penis showed minimal gastric acid injury and a clean cut through the mid-shaft of the penis. With consultation with the plastic surgery service, penile replantation was initiated. Despite full venous repair, a Winter's spongiosocavernosal shunt was performed in an attempt to maximize venous drainage. This is the first report of replantation following ingestion of an amputated penis. The penis seemed to suffer minimal trauma from being in the stomach for at least one hour, and the fact that the replantation was successful shows that ingestion of an amputated penis is not a contraindication to replantation. Coordination with the appropriate services, including gastroenterology and plastic surgery, clearly contributed to the success.

Fuoco M., Cox L., Kinahan T. Penile Amputation and Successful Reattachment: Role of Winter Shunt in Postoperative Viability: A Case Report and Review of Literature. Canadian Urological Association 2014, Trauma, Reconstruction and Diversion

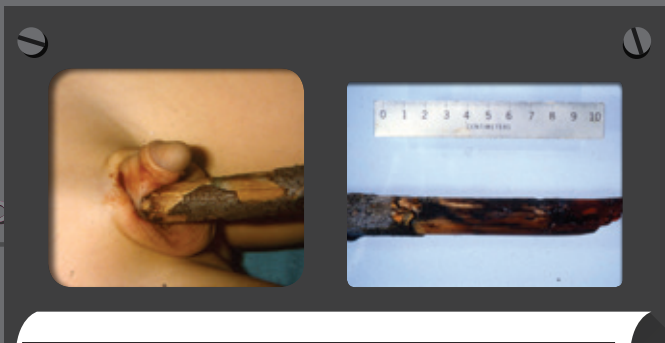
UROLOGIC TRAUMA

ACCIDENTS

Penile amputation can result from a self-inflicted injury, an assault, a medical procedure to address carcinoma or an accident. Accidents — from blunt trauma to electrocution — can cause a range of other genitourinary trauma.

While injury to external genitalia is not commonplace, it does occur. Genital trauma accounts for one-third to one-half of all genitourinary injuries and occurs much more commonly in males than females. Most injuries of the genitalia involve blunt trauma, but penetrating injuries cause more of the extreme reconstructive issues.

While rare, there are also cases of injury by electrocution — often the most serious and requiring the most extreme surgical procedures. Overall, electrical burns account for a marginal percent of burns seen at large burn centers (3-17 percent), and burned genitalia is even more infrequent. In one of the largest studies of electrical burns (70 patients), three had impact to the genitals, and all three were related to exit sites of the electricity. Electrical injuries are difficult to assess at initial presentation, and the degree of injury can be more extensive than originally suspected. They can have massive collateral damage and require intensive management.



Case: Extreme Sledding

A 10-year-old boy was sledding down a hill in a large sack, and he hit a stick. The branch was protruding from his snowsuit. A CT of the abdomen and pelvis showed no other injuries, and he was taken to the operating room. A urethrogram and retrograde cystogram were both negative for injury to the urinary tract. An incision around the protruding abdominal portion revealed no intraperitoneal penetration. The stick was removed retrograde from the penis, and Buck's fascia was found not to be penetrated, with the penis completely intussuscepted into the retropubic space. A Foley catheter was inserted, the wounds were copiously lavaged with antibiotic solution, drains were placed and the wounds were loosely closed. The Foley was removed on the second postoperative day, and he was discharged on his fifth postoperative day on oral antibiotics.

Michael Moran, MD — McComb, Mississippi

Case: Painful Pane

The patient is a 27-year-old male consulted from the ED for "scrotal lac." The patient stated he was a garbage man on his morning route when he slipped on an icy curb while carrying a pane of glass; the glass hit his bilateral upper thigh area. As he ran to catch up to the truck, he described two masses falling out of his pants. He picked up the masses and placed them on the dash of the garbage truck. He reported the driver turned pale after seeing the masses. At the next stop, his coworker mentioned that the patient had blood on his pants. Due to the amount of blood, he was brought to the ED. When questioned on NPO status, he reported they, of course, stopped at Dunkin Donuts prior to arriving at the ED. On exam, the anterior two-thirds of the scrotal wall was absent. No testicular tissue was present. The cord structures were visible in the superior scrotum with a small amount of active bleeding.

The exam findings were discussed with the patient, who commented, "I was thinking of getting a vasectomy anyway." When questioned regarding the location of the two masses, the patient thought they were still on the dashboard of the truck but was unsure of the truck's location. The masses were unable to be located.

The patient was taken to the OR and underwent ligation of the bilateral cord structures and closure of the "scrotal lac."

Melissa Brown, MD — Aberdeen, South Dakota

BITES AND STINGS

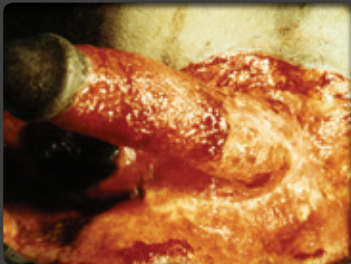
Bee stings and spider bites usually amount to nothing more than a little irritation and annoyance. But as we see with stings and bites to genital areas, there is nothing “usual” about what happens.

Perhaps the most “extreme” urologic visit arises from the patient who has been bitten, stung or infested by an animal. Most urologists have heard of the Candiru catfish of the Amazon River, made famous by “Grey’s Anatomy” on April 26, 2007, when the CEO of the hospital is parasitized by this blood-sucking fish. But there are over 30,000 species of spiders and other critters that might bite or sting a human’s genitalia. Thomas Muffet, MD (1553-1604), would be proud of our presentation of genital envenomations since his book on insects and his daughter became the basis for the poem “Little Miss Muffet.” Many spiders, such as black widow and brown recluse, have been reported to attack the external genitalia; the recluse spider is most significant because of the local skin necrosis that in 49 percent of cases results in loxoscelism, requiring genital reconstruction.^{72,73}

While there are many rumored instances of snake and lizard bites, there are only a handful of scientifically reported

cases.^{74,75} They are, nonetheless, startling in nature. Of the three snakebites to the penis and three to the scrotum that appear in literature, most of them include severe skin loss requiring intensive-care settings, anti-venom and reconstructive surgery on the external genitalia. The unanswered question is: how does the viper get to the genitalia? Of the three reported cases of penile bites, there is mention of the victim fondling the reptiles. If this is true, one must wonder — who here is the victim? In another case, the man had his pet Western diamondback rattlesnake in his lap; the snake had not been fed in two weeks!⁷⁶

If spiders, snakes and lizards aren’t enough, let’s not forget that animal bites to the genitalia can also cause severe trauma, sometimes resulting in the complete removal of the penis. Man’s best friend isn’t **always** man’s best friend. Dogs are the most notorious for causing bites to the genitals in Western civilizations;⁷⁷ and in developing parts of the world, there are reports of rats biting the genitalia of small infants. Dog bites carry the risk of rabies (the dog must be carefully observed for erratic behavior) and toxic bacteria in their mouths.⁷⁸ Local debridement, copious wound irrigation, empiric antibiotics and tetanus immunization are all recommended as initial management for animal bites. Severe trauma calls for more advanced genital reconstruction.



Case: Extreme Farming

A healthy 32-year-old farmer presented within two hours of a degloving accident involving the power take-off of his tractor. The injury removed his trousers, underwear and the skin covering his external genitalia. He was lucid, awake and in moderate pain, but was able to void spontaneously prior to being taken to the operating room. The only skin remaining on his genitalia was at the glans. All injuries were copiously lavaged and cleaned prior to replacing his penile skin with small-meshed skin grafts and split-thickness skin grafts over his scrotum from donor sites on his anterior thighs. He healed with no skin infections, and his sexual function had returned by the three-month follow-up.

Michael Moran, MD — McComb, Mississippi



Case: Little Mr. Muffett

A 47-year-old Hispanic painter presented for his second visit to the Emergency Department (ED) after a scrotal insect bite.

Roughly one week prior to this visit, he came to the ED after something (he did not see what) bit him while he was painting in an old house. He had a swollen and red scrotal lesion.

The ED physician put him on Keflex and discharged him with instructions to return if this did not improve.

He returned five days later with a large lesion, progressive pain, swelling and some pruritus. The Keflex did not help. The area of the bite itself was painless, but surrounding tissues were painful. He was afebrile, and voided urine was clear. He was taken to the OR that same day, after being admitted and started on parenteral fluids and antibiotics.

During surgery, the necrotic area was bloodless and deep, penetrating to the Dartos fascia. This area of necrosis was completely excised, and primary loose reconstruction with drainage was performed. He was discharged after two days with a completely viable flap closure that was healing.

Michael E. Moran, MD — McComb, Mississippi

UROLOGIC TRAUMA

A CANDIRU CAN DO WHAT?



The candirú goes by many names— toothpick fish, cañero, penis fish— but it is most widely known as the “vampire fish,” and with good reason.



Cetopsis candiru (Solimoes, Brazil, 15 September 1865)
Harvard Library

The candirú goes by many names — toothpick fish, cañero, and even penis fish — but it is most widely known as the “vampire fish,” and with good reason. The candirú — or *Vandellia cirrhosa*, as it is called — is a species of freshwater catfish within the family *Trichomycteridae*. Found exclusively in the Amazon Basin of South America, this little fish survives on the blood of other, much larger fish. Given its translucent appearance, scaleless body, and small size — on average, about 5 cm long — it is almost impossible to spot in the murky, turbulent rivers of the Amazon, making it a truly terrifying parasite. Once a host has been spotted, the candirú will quickly bypass the gill cover of its prey and swim into the cavity. There, it will anchor itself to the host using the backward facing spines found on its own gill covers and only then can it feed, using its sharp, needle-like teeth to lacerate the aortal arteries and extract blood.⁷⁹

But if this is unsettling, consider that the candirú has been reported to attack people. Numerous South American explorers of the 19th century have reported that the candirú “make a remorseless war on the calves of the natives ... dart impetuously at the fleshy mass, and rend a portion away,” leaving behind “cupping glass-like wound[s].” Gustav Wallis considered the creatures “as much the scourge of the waters as mosquitoes and ants are on the land.”⁸⁰

Yet far more sinister are the reports of candirú attacks involving the bodily orifices, including the ears, nose, anus and vagina, although the urethra is most often cited as the candirú’s target of choice; and supposedly, the creature is capable of swimming up into the bladder, where it can lead to inflammation and even death.^{81,82}

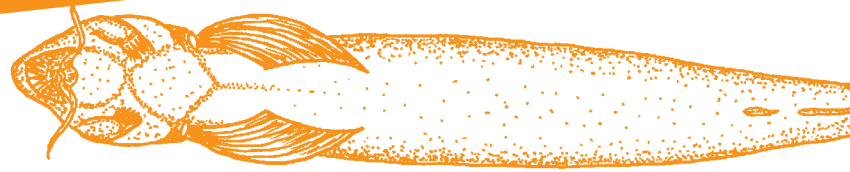
The first recorded instance of a candirú attack comes from German biologist Martius in his preface to Spix and Agassiz’s 1829 publication, “*Selecta Genera*.” It is an anecdotal account, conveyed to him by the native Brazilians, but is nevertheless compelling.

“By a singular instinct,” Martius writes, “[the candirú] is incited to enter the excretory openings of the human body ... in those who are bathing in the river... desiring to eat the flesh [and] ... are strangely attracted by the odor of urine.” For this reason, the natives were said to tie a string around the prepuce of the penis — or in other instances, equip themselves with penis sheaths made of coconut shells or dried palm leaves — before entering the water and refrained from urinating. In 1855, Castelnau of France expounded upon this phenomenon after interviewing the fishermen of Araguay. According to them, the candirú, upon encountering someone unwise enough to urinate in the river, “launches itself out of the water and penetrates the urethra by ascending the length of the liquid column.” Although some experts on the subject, like Gudger, find this last assertion “absolutely preposterous,” others, like Marcoy, compare the candirú to “trout and salmon” for their shared ability to “mount rapid falls.”⁸³

But is the candirú’s grisly reputation based on fact or mere myth?

Accounts like those above suggest that the candirú is attracted to urine, but since the 1900s, its urinophilous nature has been tested and never once confirmed. In 1921, Professor Allen conducted such an experiment, soaking cotton and cheesecloth in urine and then using these to bait a Briggs lead-in trap. Yet no candirú were caught.⁸⁴ More recently, a study conducted in 2001 by marine biologist Stephen Spotte and published in *Environmental Biology in Fishes* studied the feeding habits of *Vandellia cirrhosa* and found that they do not respond to human

“CANDIRÚS ARE VERY EVENTFUL CREATURES ... THEY DON’T NEED OUR URETHRAS TO BE INTERESTING.”



urine — or seemingly any potential chemoattractants — but use visual cues to detect prey.⁸⁵

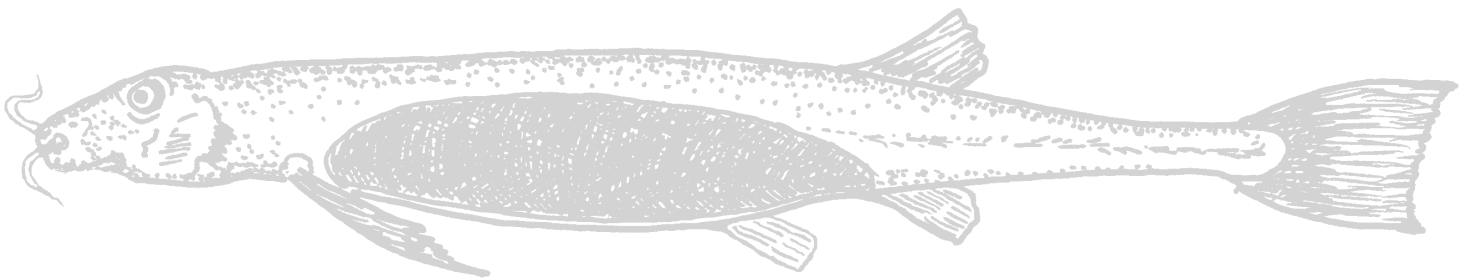
Furthermore, while there are many accounts of candirú attacks, most of these come secondhand from explorers, botanists, anthropologists and occasionally physicians — including Martius and Castelnau — after visiting the Amazon and conversing with the natives, oftentimes in spite of significant language barriers. Those case studies derived from reputable scientists and physicians are also reported, by and large, as secondhand accounts. In those rare instances when a firsthand account is reported, more often than not it is the vagina that has been attacked, not the urethra. In his writings from 1836, Dr. Poeppig describes one such incident. The victim — a woman native to the Amazon — was penetrated vaginally by the fish and “suffered such frightful pain and loss of blood that she was given up to die.” After internal and external application of juice from the *Xagua* — also known as the buitach apple or *Genipa Americana*, a native fruit said to dissolve the fish’s spines and allow for extraction — it was removed, and the woman survived.^{86,87,88}

One would hope that in the 20th and 21st centuries, when the technology exists to fully document candirú removal, more reliable case studies would present themselves. Yet there have been virtually no cases of a candirú attack since Gudger’s comprehensive article of the early 1900s, “Penetration of the Human Urethra by an Amazonian Catfish Called Candiru,” even though tourism to South America has exhibited an annual average growth of 5.2 percent since 2005; and in 2013 alone, 27.4 million people had visited.⁸⁹

There is only one recent case study, reported in 1997 by Dr. Samad Anoar, a urologist in Manaus, Amazonas. According to the case report, the patient was a 23-year-old male who arrived at Dr. Anoar’s clinic in extreme pain and with high fever. According to the patient, three days prior he’d been thigh-deep in a river, urinating, when a little fish jumped out of the water, traveled up his urine stream and inserted itself into the urethra. The perineum was then opened up, and the fish removed endoscopically. Dr. Anoar took great care to document the entire incident, providing proof of the operation with a number of photographs, a video of the procedure, and the original fish after its removal, preserved in formalin, which he later donated to the National Institute of Amazonian Research—so there is little doubt that a candirú was stuck in the patient’s urethra.⁹⁰ But can we really claim it swam up there of its own accord, or did it, perhaps, get into the urethra through other means? The specimen was a little over five inches in length, with a head 0.45 inches in diameter; a fish of that size would not easily be able to swim up a urine stream, nor would it be able to produce sufficient force against the current to make its way into the urethra and up to the urinary sphincter.

It seems that the candirú’s penchant for the urethra is a mere myth — but what a fantastic myth! — and as marine biologist Spotte rightly ascertains, “Candirús are very eventful creatures ... They don’t need our urethras to be interesting.”⁹¹

Kayla M. Smith, University of Maryland School of Medicine, MD Candidate, 2017



UROLOGIC TRAUMA

DISEASES

The term trauma conveys a sense of violence and shock. But genitourinary trauma can also occur when a person is afflicted with certain diseases.

Genital lymphedema, secondary to impaired lymphatic drainage caused by parasitic filarial worms *Wuchereria Bancrofti*, often represents as a most grotesque urologic oddity. Filarial worms have been detected in the autopsy of a 3,000-year-old Egyptian mummy, and lymphedema deformities have been narrated in ancient texts in India, China, Persia and Japan.⁹²

The World Health Organization (WHO) estimates that about 1.1 billion people in 80 countries in the equatorial zones are at risk of filariasis, with 120 million actually infected. Almost 25 million males suffer from genital lymphedema and hydrocele, and an estimated 15 million women suffer from elephantiasis or limb lymphedema. In some areas, it is predicted that as many as one-third of children are infected by age 5 and almost the entire population is infected by age 30. As the worms continue to accumulate and grow in size, they ultimately cause medical problems in up to one-third of infected individuals, including: hydrocele, fever, lung wheezing, blood in the urine and a severe swelling of

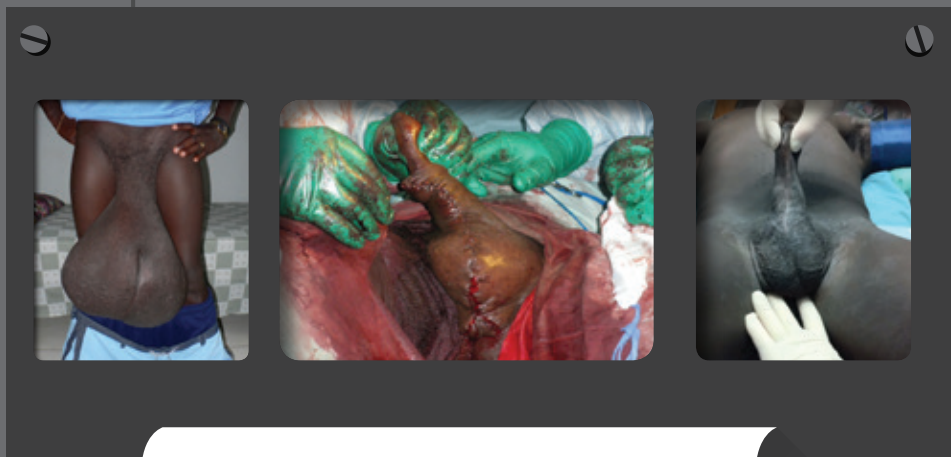
the upper and lower extremities known as elephantiasis. Globally, filariasis is recognized as the second leading cause of long-term disability resulting in physical, psychosocial, crippling and economic devastation.

With an ambitious goal of eliminating filariasis by 2020, the WHO created a Global Alliance for Elimination of Lymphatic Filariasis with multiple institutional and country partners in 2000. The two essential pillars in the strategy are:

- mass treatment of at-risk population with annual single-dose antifilarial drugs albendazole and diethylcarbamazine for four-to-six years
- care for patients already suffering from lymphedema and hydrocele

With sustained efforts by the alliance and active, vigilant participation of the involved countries and communities, we can hope to eliminate the grotesque disfiguring and disabling deformities of limb and genital lymphedema that remains as a scourge of our civilization.⁹³

Sakti Das, MD — Lafayette, California



Case: Huge Filarial Scrotum

Huge filarial scrotum in a 22-year-old Haitian male excised and reconstructed with excellent result.

Martin Deneen, MD — Daytona Beach, Florida

ENTRAPMENT

Penile entrapment injuries represent an “extreme” urologic condition that may challenge urologists; the degree of injury can range from being minor, with only pain and swelling, to severe, if gangrene of the penis and/or urethra ensues. If not treated, penile entrapment can lead to urological emergencies, including strangulation and infarction.

In severe conditions, the removal of the entrapping device can be challenging. Glass bottles are notoriously difficult to remove and must be handled carefully, as the risk of glass further injuring the penis or urethra can be worse than the entrapment itself. Metal entrapment devices are difficult to remove; diamond saws, wire cutters and other heavy equipment might be required, though metal-cutting devices generate both heat and sparks. Reports of fire caused by these devices prompt some investigators to ingenious strategies.



Case: A Single Strand of Hair

A 14-month-old male presented to the emergency room with a painful, swollen penis. The child had been reported to have voided and had no post-void residual during initial evaluation. There was no urine for urinalysis. He was not circumcised, and the mother had been retracting the foreskin routinely for preputial care. During examination, a hair was discovered wrapped tightly about the preputial foreskin, just behind the coronal sulcus. When this was released, the pain was rapidly relieved; the boy voided spontaneously; and a urinalysis was obtained. After observation and topical application of an antibiotic ointment, the swelling was already beginning to dissipate. The glans remained warm, and no ischemia was observed. He was eventually discharged with careful instructions to follow up the next day at the clinic. The penis was back to normal, but the preputial foreskin was still mildly edematous but retractile.

Michael Moran, MD — McComb, Mississippi



Case: Super Trapped

I was at the hospital when I was called by the Emergency Department physician to evaluate a psychiatric patient who had placed an artifact on his penis. No sweat, I thought. Been there and done that ... NOT!! This gentleman managed to put all the way back to the base of the penis a piece of metal used in the driving column of old cars, which is actually made of a special metal that is SUPER strong to resist the work it is designed to do. NOTHING would cut this, and we tried everything. Finally a maintenance guy passed by and said that he could help. He actually did, giving us a saw that we used to cut the piece in half.

Please note:

There is a resident holding a bottle of water that was used to cool down the part every now and then during the procedure (vapor came out!).

One of the instruments that did not work to cut the metal part (the large, red pliers) was placed over the inguinal vessels in case the saw slipped to that area.

Although it is not clearly seen in the photographs, there was a thin, blue piece of metal, which was the only thing that fit (it was actually a metal saw leaf), placed between the skin of the patient and the metal part to protect the penis.

I worked the saw and my fellow senior resident helped me out. We were lucky — not only were we successful cutting it, but we managed to do it without even a scratch on the patient!

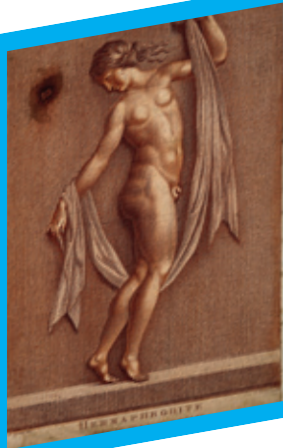
William Roman-Torreguitart, MD, FACS — Mayaguez, Puerto Rico

GENDER IDENTITY

Gender identity is not a male/female issue — it is a human one. According to the Human Rights Campaign, “the term ‘gender identity’ refers to a person’s innate, deeply felt psychological identification as a man, woman, or some other gender, which may or may not correspond to the sex assigned to them at birth.”⁹⁴

A HISTORY OF GENDER

According to Ovid, the water nymph Salmacis fell in love with Hermaphroditus, the beautiful son of Hermes and Aphrodite, and fused her body with his. The two became a single being with both male and female genitalia.



Hugh Hampton Young began his 1937 book, *Genital Abnormalities, Hermaphroditism and Related Adrenal Diseases*, with versions of Ovid’s story, and noted that, while his book was intended to present remarkable genital abnormalities that he had treated surgically, “as we delved deeper and deeper into the subject, the scope grew and grew, owing to unexpected and often hitherto undescribed conditions, anatomic, pathologic, endocrine and psychologic, which were intimately associated with the clinical problems presented.”⁹⁵

And, as noted by the Intersex Society of North America in 1993, gender *is* complicated:

*If you ask experts at medical centers how often a child is born so noticeably atypical in terms of genitalia that a specialist in sex differentiation is called in, the number comes out to about 1 in 1,500 to 1 in 2,000 births. But a lot more people than that are born with subtler forms of sex anatomy variations, some of which won’t show up until later in life.*⁹⁶

The history of this topic is long and significant, but today it seems obvious that categorizing patients into one or the other stereotypic gender is far from ideal. The biology of intersexuality was interesting to Aristotle, who began to believe that gender was a duality. Hippocrates saw some continuity from female to male. One of the first modern classification schemes was by Isidore Geoffroy Saint-Hilaire (1805-1861) in France and Sir James Young Simpson (1811-1870) in Great Britain. Geoffroy divided human sexual anatomy into six “sex segments,” with masculine and feminine hermaphroditism, both “mixed” and “complex.” Theodor Albrecht Edwin Klebs (1834-1913) came up with the categories true hermaphroditism and pseudohermaphroditism, which became the dominant theory for the early 19th century until steroid biochemistry became understood. One common theme in all these theories is that the gonad determines the gender, or phenotype. Embryology began to intrude, and early in the 20th century, the physiology of sex steroids began to be unraveled by Charles Edouard Brown-Séquard. By 1914, things were so confused that David Berry Hart (1851-1920) clamored to eliminate the term “hermaphrodite” and proposed the term “sex ensemble” to describe these individuals.⁹⁷ In 1915, British gynecologist William Blair Bell began to have doubts about the whole system, writing, “I want ... to raise the question as to whether we are justified ... in branding with a sex which is often foreign not only to their appearance but also to their instincts and social happiness.”⁹⁸ Each patient was an individual, and it was time to eliminate the term and the stereotype of the hermaphrodite. Richard Goldschmidt coined the term “intersex” in 1917.⁹⁹

The complex sexuality of modern day intersex individuals remains enshrouded in gonads, reconstructive surgery and sexual morés of the society. The feminist movement opened the gates to those whose gender identities were questioned and led to our postmodernistic questioning of

GENDER IDENTITY IS NOT A MALE/FEMALE ISSUE —
IT IS A HUMAN ONE.

“normal” sexuality. The Intersex Society of North America is a support group for intersex individuals that questions institutional review boards and surgical reconstruction with autobiographical stories.

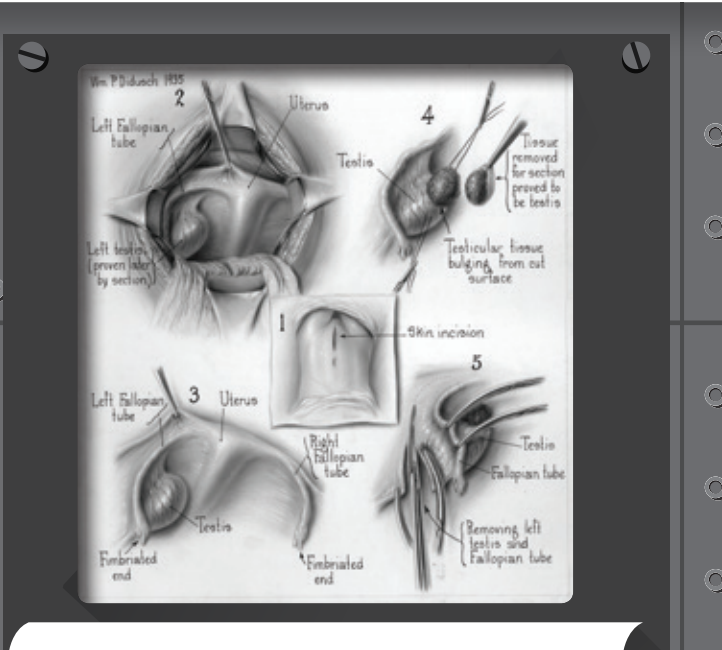
Michael Moran, MD — McComb, Mississippi

A HISTORY OF GENDER REASSIGNMENT: CLOACAL EXSTROPHY

Cloacal exstrophy has been known historically as vesico-intestinal fissure, ectopia vesicae, and, perhaps most appropriately, extrophia splanchnica, which literally means “turned-out organs.” Cloacal exstrophy, first described by Littre in 1709, is an extremely rare congenital malformation that occurs in 1 in 200,000 to 400,000 live births.^{100,101,102,103} Cloacal exstrophy is caused by premature rupture of the cloacal membrane prior to when the urorectal septum descends at six-to-eight weeks gestation. The anomalies that result are multiple and include severely malformed external genitalia. In females, the vagina can be reconstructed or augmented using colon, ileum or full-thickness skin graft.^{104,105} Unfortunately, in males there are not always adequate phallic structures for reconstruction. In these cases, a difficult decision must be made. One choice is to proceed with a difficult and possibly unsuccessful male genital reconstruction. The other choice is to perform a gender reassignment surgery (removal of the gonads) and raise the child as a girl.

Physicians have long recognized the social, psychological and surgical difficulties that are encountered with cases of malformed genitalia. A book on pediatric surgery from 1910 stated that “malformations and defects of the sexual organs demand the most thoughtful attention of the surgeon, since any departure from the normal condition renders its possessor liable to ridicule, and morbid sensitiveness leading to melancholy or even insanity.”¹⁰⁶ In the early 20th century, plastic surgery was limited for severe cases of malformed external genitalia. In males, if it was felt procreation would not be achievable, it was recommended to “unsex the patient at an early age for both physical and moral reasons.”¹⁰⁷

Prior to 1957, cloacal exstrophy was a fatal congenital malformation. In 1957, P.P. Rickham, a surgeon at the Alder Hey Children’s Hospital in Liverpool, performed the first successful operation of cloacal exstrophy.¹⁰⁸ The next two decades saw major advances in the surgical treatment and survivability of patients with cloacal exstrophy. By the 1980s, the mortality rate had dropped to around 50 percent, but cloacal exstrophy was still considered a major operative challenge. Except for the less severe cases, it was



Case: Hermaphroditism, Pseudo.

Patient brought up in male orphanage. “Penis” small, hypospadiac. Small vagina. Preoperative diagnosis: a male, with undescended testicles. exploratory laparotomy: discovery of uterus, Fallopian tube and left “ovary”; no gonad on right side. Child put into girl’s clothing; transferred to female orphanage. Developed marked habit of masturbation; on this account enlarged “clitoris” was amputated. At age 17, operation for hernia: discovery that supposed ovary was testical. This was removed. Patient again assumed male clothing.

From *Genital Abnormalities, Hermaphroditism & Related Adrenal Diseases*, 1937, by Hugh Hampton Young, MD

GENDER IDENTITY

recommended that all genetic males be given a female gender assignment and undergo appropriate surgery early in life.^{109,110,111}

The 1990s saw similar attitudes toward gender reassignment. In 1989, Husmann et al. published on their experience with phallic reconstruction in eight males with cloacal exstrophy. Their patients suffered from impotence and inadequate phallic size for penetration, and had significant psychological trauma from phallic inadequacy, some requiring intensive psychiatric counseling.¹¹ Similar experiences were reported by other pediatric urologists, supporting the decision for gender reassignment in the neonatal period.^{112,113}

In 1999, Mathews et al. published on the testicular morphology in patients with cloacal exstrophy. Despite these patients' other severe malformations, it turned out that the testes were normal.¹¹⁴ These findings brought up implications in terms of sexuality for genetic males who had undergone gender reassignment. Was gender identity determined by prenatal hormones/genetic factors or rather by society? The issue of gender reassignment, which for decades had been considered the standard of care, became controversial.^{115,116} Some physicians reported that gender reassignment did not necessarily lead to psychological, emotional or behavior distress and continued to recommend that gender assignment

depend on the likelihood for reconstructing an adequate phallus.^{117,118} Others argued that gender identity in 46XY neonates was heavily influenced by prenatal androgen exposure.¹¹⁹ In addition, several studies showed that gender reassignment in 46XY infants held an increased likelihood for patients to recognize a male sexual identity independent of sex-of-rearing and to be at risk for depression.^{120,121,122,123,124} In the last decade, there have been significant improvements in terms of successful reconstruction of the external genitalia.^{125,126,127} In part due to these improvements, as well as a new focus on sexuality, brain imprinting by androgens and quality of life, most pediatric urologists now favor male gender assignment for 46XY cloacal exstrophy patients.¹²⁸

Cloacal exstrophy remains an extremely complicated medical condition requiring a multidisciplinary approach. When diagnosed on intra-utero ultrasound, parents need to be counseled on the severity of the condition and have realistic expectations when deciding to continue the pregnancy. Maintaining a high quality of life should be the primary concern for patients with cloacal exstrophy. The decision regarding gender assignment is controversial and requires input

from the pediatric urologist, endocrinologist and psychologist. The question remains whether it is better to raise a boy with an inadequate phallus or a 46XY girl who may subsequently have significant gender dysphoria. Regardless of the choice, as the child grows and reaches puberty, there will inevitably be questions by both the parents and the child regarding sexuality and body image. Ultimately, it is important to provide information, intervention and support that

do not "burn bridges" and would allow the patient to participate in the decision-making process, particularly when it relates to gender assignment.

Jennifer Gordetsky, MD — Birmingham, Alabama



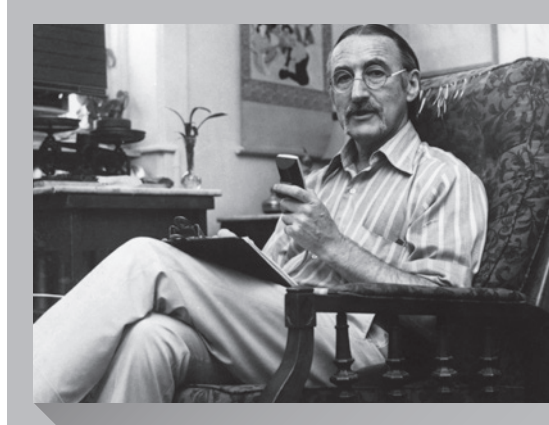
Photograph of patient with 46XY cloacal exstrophy with rudimentary phallic structures presented in previous and current surveys.

Gender Assignment for Newborns With 46XY Cloacal Exstrophy: A 6-Year Followup Survey of Pediatric Urologists

David A. Diamond, Jeffrey P. Burns, Lin Huang, Iliana Rosoklija, Alan B. Retik

Department of Urology, Children's Hospital, Boston, Massachusetts

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John Money in his office.
Courtesy of Chesney Archives,
Johns Hopkins University

THE JOHN/JOAN CASE

After consulting with well-known Johns Hopkins psychologist Dr. John Money in 1966, the parents of a young boy whose penis had been destroyed in a botched circumcision decided to raise their son as a girl. His (uncircumcised) twin brother was raised as a boy. In 1973, Dr. Money reported that the child, who had been castrated and furnished with dresses and dolls, was doing well and had accepted the new identity as a girl.

But in a 1997 report in *The Archives of Pediatrics and Adolescent Medicine*, a pair of researchers provided a detailed follow-up: the boy had repudiated his female identity at age 14 and had even had surgery to reconstruct his genitals. The report caused an uproar, and Dr. Money was criticized in news reports and in a book on the case. In 2004, the man who had reclaimed his sex committed suicide. His family blamed the effort to change his sex.

Dr. Money was mortified by the case, colleagues said, and as a rule did not discuss it. "Given what the field knew at the time, Money made the right call about what to do" with the child, said Dr. Richard Green, a former colleague and an emeritus professor at the University of California, Los Angeles. "It's easy in hindsight to say it was wrong, but I would have done the same thing." Doctors today are far more wary of trying to re-engineer biology in this way, particularly in rare cases of badly damaged genitals, when the genetic sex is clear. Recent studies have emphasized the importance of prenatal exposure to hormones in shaping sexual identity.¹²⁹

THE MORE THINGS CHANGE, THE MORE THEY STAY THE SAME.

– JEAN-BAPTISTE ALPHONSE KARR, 1849

Urology is certainly more than just the “study of urine,” as the Greek etymology of its name suggests. As our knowledge base expands, so too does the practice of urology. But even as the urologic field is confronted with novel circumstances and unique medical issues, it is important to remember how yesterday’s man faced many of the same issues afflicting today’s man.

The Indian philosopher-surgeon Susruta, who practiced sometime between 600 to 1000 BCE, compiled the Susruta Samhita, the earliest oral rendition of systematic teaching of surgery. In it, he describes afflictions that impact man, such as erectile dysfunction and premature ejaculation. And while in present day medicine, PDE5 inhibitors may be used to treat erectile dysfunction instead of Susruta’s prescription of “soothing erotic ambience, music, diet and various exotic aphrodisiacs,” Susruta nevertheless reminds us that the ailments facing humans thousands of years ago are not so different than what we see today.

SO WHAT DO YOU THINK?

Is there really such a thing as Extreme Urology?

Or is the urology of today simply based on a greater sense of awareness and understanding, driven more by knowledge and acceptance and less by traditional and regional notions and judgment?

The William P. Didusch Center for Urologic History hopes to carry on the tradition of publishing interesting urological stories.

If you, like the authors of the following stories, are interested in collaborating in this endeavor, please email archives@AUAnet.org



DRIPPY CUP

I had this patient in my practice who is incontinent and wanted to share with me the most efficient and cost-effective continence mechanism in existence, which was designed by him to avoid the need to constantly buy adult diapers. It consisted of larger than usual underwear with a reusable plastic cup that stayed in place (I still don't know how!). He walked, moved around and sat down without difficulty! Talk about skill! He still comes into the clinic periodically and refuses any further treatment as he is happy with his system.

William Roman-Torreguitart, MD, FACS — Mayaguez, Puerto Rico

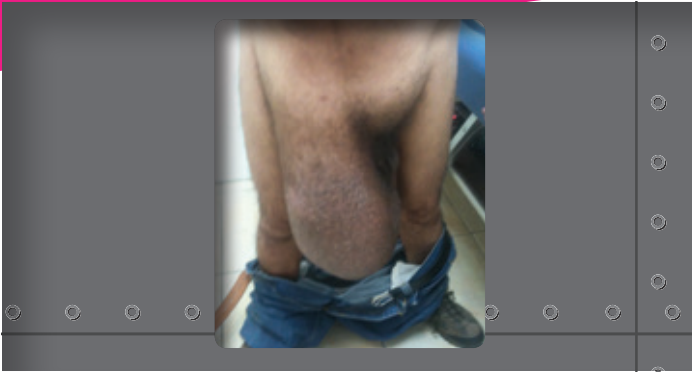


BIG KAHUNA

We all have seen penile cancer lesions, but this case is special! This is a 49-year-old young male who sits in front of me and tells me that he is having some difficulty voiding and a bit of secretions in his penis. I think the picture speaks for itself! Worst part is that his young wife was there, and she looks at me and says, "It's a bit worse so we decided to come check it out." What???!!!

He was managed with an aggressive partial penectomy (the patient refused total penectomy). It came back low-grade squamous cell carcinoma with negative margins. He was referred to Dr. Antonio Puras Baez, director of our residency program in Puerto Rico and penile carcinoma guru, for further evaluation and management to consider inguinal lymphadenectomy.

William Roman-Torreguitart, MD, FACS — Mayaguez, Puerto Rico



BURGEONING BOWEL

My father and I are partners (both urologists) and sometimes consult on cases with one another. This mature male comes into his office and tells my dad he has a small bump in his right testis which is “kind of getting bigger.” My dad examines him and then calls me in to take a look at the patient. The picture speaks for itself! I guess all his bowel was in there! That explains his occasional constipation! He was sent to the general surgeon, who offered a herniorrhaphy, but he refused because he felt no symptoms and just wanted to check on the lump to make sure it was not “something bad.”

William Roman-Aqueron, MD, FACS, William Roman-Torreguitart, MD, FACS, Mayaguez, Puerto Rico



CALCIFIED HAIRS

This is a middle-aged female patient with recurrent UTIs. She was found to have cystolithiasis with no voiding dysfunction. The stones had a “funny-looking” shape — like small twirls or circles. When taken to the operating room, the odd-looking stones were multiple pubic hairs in the bladder that calcified. She was managed with cystolitholapaxy, and the stones were removed. Urodynamic studies were done and found normal. The patient did fine on follow-up. How they got there is still a mystery!

William Roman-Torreguitart, MD, FACS — Mayaguez, Puerto Rico

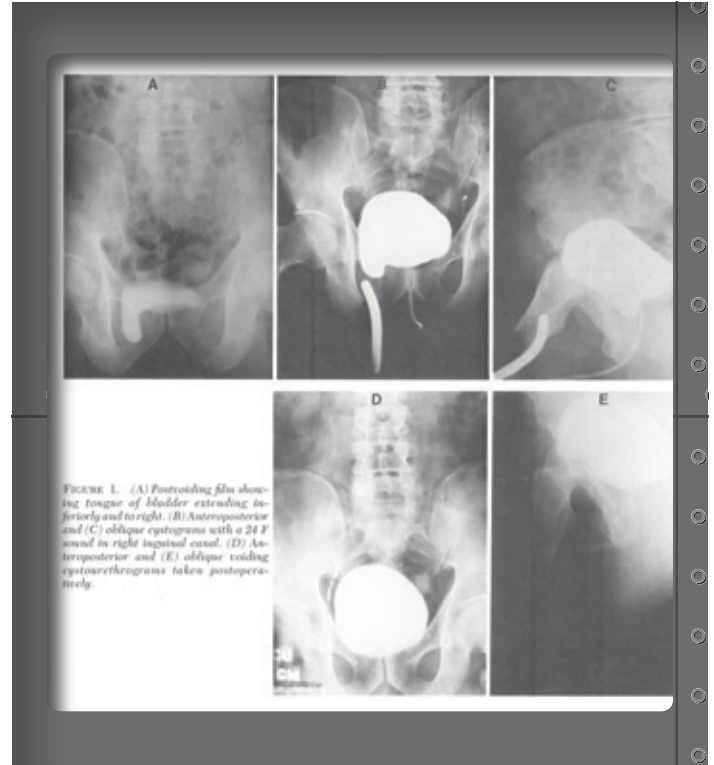


FIGURE 1. (A) Postvoiding film showing tongue of bladder extending inferiorly and to right. (B) Anteroposterior and (C) oblique cystograms with a 24 F sound in right inguinal canal. (D) Anteroposterior and (E) oblique voiding cystourethrogram taken postoperatively.

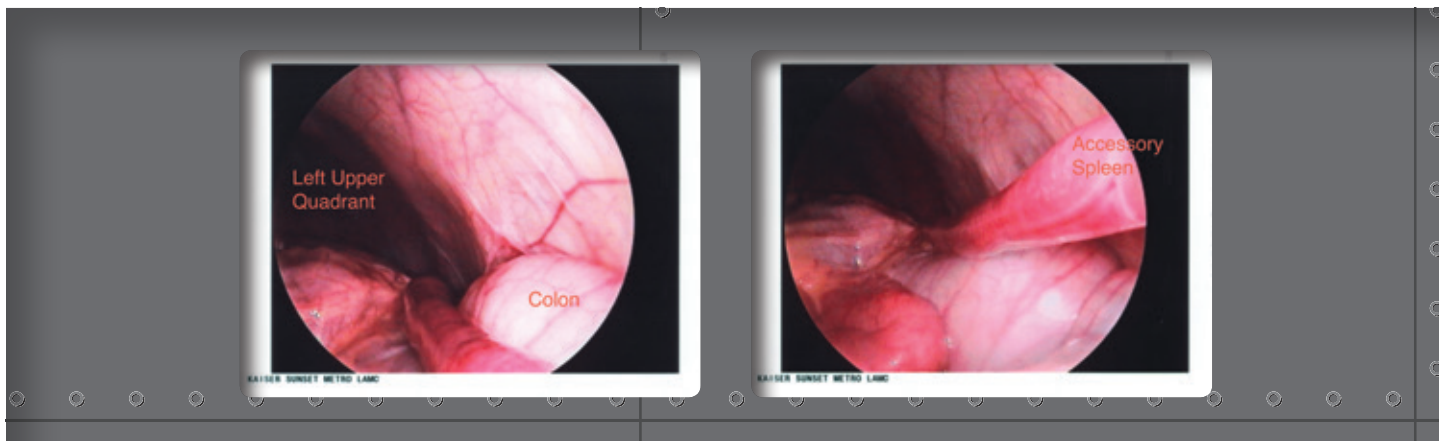
OBTURATOR HERNIA

The case of an obturator hernia of the urinary bladder was memorable because of the nature of the chief complaint. A Master Sergeant with a chest full of medals, including a Purple Heart and combat awards, came into my office. I asked him what I could do for him, and he said the following:

“Doc, when I take a piss, there is this pain that shoots out of my asshole and runs down to the back of my knee.”

I wasn’t sure what that meant as I had never had a patient with a similar complaint. I worked him up, and it in fact showed that he had an obturator hernia pre-op. I repaired it with complete resolution of his pain.

Michael McCarthy, MD — Carlsbad, California



A CASE OF SPLENOGONADAL FUSION

A Tug of War between the Testicle and the Spleen

A 14-month-old boy was referred for a left undescended testicle. Examination revealed a normal right intrascrotal testicle and a normal phallus. The left testicle was not palpable on exam. An ultrasound showed the testicle above the left internal inguinal ring. A laparoscopy with a one- or two-stage orchiopexy was planned.

The exam was repeated in the operating room after induction of general anesthesia. The testicle was still non-palpable. A 5 mm trocar was inserted through the umbilicus, and a pneumoperitoneum was established. Laparoscopy was started, and immediately a 1 cm cord of tissue was seen extending along the descending colon. The proximal extent of the cord of tissue was inspected and was found to be originating from the spleen in the upper left quadrant. The tissue had the same color and consistency as the spleen.

The distal end of the cord of tissue reached the internal inguinal ring ... and what did we find ... the left testicle firmly attached to the end of this cord of splenic tissue! This had seemingly prevented the testicle from descending into the scrotum. A tug of war between the spleen and the gubernaculum—and the spleen had won.

The splenic tissue was dissected off the tunica albuginea with electrocautery. The testicular artery was dissected to gain some length, and the testicle was successfully pulled into a dartos pouch in the left hemiscrotum—a single-stage laparoscopic-assisted orchiopexy.

Accessory spleens are recognized as an anatomical variant in approximately 10 percent of the population, and splenules can sometimes be adherent to the gonad. Splenogonadal fusion can result in one or more accessory spleens along the path from the abdomen into the pelvis or scrotum. The developing spleen forms near the urogenital ridge from which the gonads develop. The testes may pick up some tissue from the spleen; and as they descend through the abdomen during development, they can produce either a continuous or a broken line of deposited splenic tissue. This was the first reported case of a continuous splenogonadal fusion presenting as cryptorchidism.

The diagnosis was wholly unexpected but easily identified and treated. Just one more possibility to add to the list of what you might find when you insert a camera into the peritoneal cavity.

Armen Dikranian, MD — Alhambra, California



BUCKLE UP

I was called for a patient who had placed a belt buckle by “mistake” in the wrong place. He actually missed by a lot! No problem — as long as the ortho instruments are around and we have jelly (as we always do) — there is no buckle we can’t handle! The patient did fine.

William Roman-Torreguitart, MD, FACS — Mayaguez, Puerto Rico



HEAVY WEIGHT

I was at the Emergency Department and in came a medical chopper with a urologic emergency. A young man that practices body building had a problem. He wanted to develop the muscles of the pelvis he used to pump back and forth while having sex. He figured if he placed a large weight on his penis and had sex with his partner, it would work. The only problem is that it got a bit swollen and wouldn’t come off. No cutting tool can go through this one (not even ortho instruments). Fortunately, he was uncircumcised; and with a “pen-rose,” a lot of jelly, and even more patience, I was able to pull it off. This guy REALLY owes me! He did well.

*William Roman-Torreguitart, MD, FACS
Mayaguez, Puerto Rico*

MINTY FRESH

This case was a Navy case. A second-class boilermaker was admitted with lower urinary tract irritative symptoms and reported passing copious "white pus" from his urethra when he urinated. All his urological films were normal. His cysto exam was also normal. He was observed to void, and there in fact was white-yellow "pus." When you spun a sample of his urine, there was a dense, large, white deposit in the body of the tube. When you looked at it under the scope, it showed a lot of amorphous material and crystalloid material. Nothing grew from his urine. We were puzzled. He was overly respectful. He would submit to cysto exams whenever asked. I even had residents on watch get him up at night and have him urinate, and he had the same material in his urine. This had been going on for two weeks.

Finally I had a flash. We had to assume he was putting something up his urethra. What better than toothpaste? We sent him on a consult off the ward, raided his bedside table and got a sample of his Colgate toothpaste. Our forensic pathologist thought this was a match. I wanted to take him for judicial punishment. To do that, we needed absolute proof. We had spectrographic analysis of what he had been passing but needed Colgate to provide the entire spectrographic analysis of their product, along with its chemical composition. They refused. I solved it by getting very close to him, pointing my finger in his face, and telling him, "I know what you have been doing. I am discharging you. If you ever show up here or at any other urological department, I will hear about it and will see that you are court martialed."

Michael McCarthy, MD — Carlsbad, California



BLIND-ENDED VAS

This was a young male I took to the OR due to infertility, with an abnormal sperm count and a left varicocele for a sub-inguinal varicocelectomy. In the physical exam, both vas were palpable in the scrotal sac, but when I isolated the cord during the surgery, I usually identify the vas to protect it and could not find it. Upon further dissection, we found it to be a blind-ended vas deference, which is pretty odd! We proceeded with surgery, and the patient did fine. Further studies confirmed both kidneys as well.

William Roman-Torreguitart, MD, FACS — Mayaguez, Puerto Rico

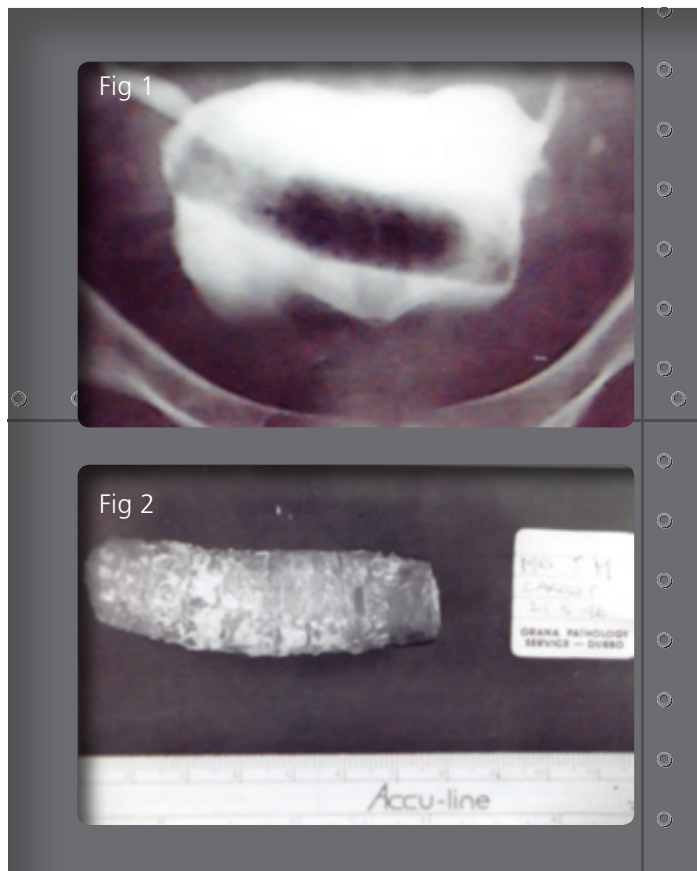
TIE ONE OFF

I came to San Diego as the chairman of urology at age 37, five years out of my residency. After passing my boards, I read the Journals infrequently. It was customary for the chairman to make grand rounds on every urology in-patient with the staff and all the residents once a week. My first rounds, the second patient presented to me was a young enlisted man who was admitted for “a brown recluse spider bite to his genitalia.” I knew nothing of brown recluse spiders. When I examined him, he had a quarter-sized area of black necrosis on his glans penis and a similar sized area of necrosis on the base of his scrotum. I noticed his very attractive wife dressed to the nines all in black sitting at his bedside reading *Cosmo*. When we moved away from the bed, I told the resident to get a psych consult. He looked at me like I was some idiot who didn't know anything about spider bites, and he said, “With all respect, Sir, why would you want a psyche consult in this case?” The resident's wife's name was Linda. I looked at him and said, “Hey, Tommy! Do you think that if you were lying in bed with part of your genitalia in the process of sloughing ... that Linda would be sitting reading *Cosmo* rather than wringing her hands and demanding to know what we were doing about her husband?”

That was a Monday. The following Wednesday, Tommy stuck his head in my office with a broad smile on his face and said, “Boss! We got the psyche consult. A totally normal sailor!” I asked who had done the consult, and he told me a psych resident. I told him to get a staff psychiatrist to repeat the evaluation. The next day, the psychiatrist did an amytal interview on the ward in bed—the so-called “truth serum.” The patient told him that he and his wife wanted to have a lesbian relationship so he had tied a piece of string around his penis and scrotum with the hope that they would fall off. He was transferred to psyche and discharged eventually.

Fast forward 15 years. I am at the VA Hospital and have had open heart surgery, and I'm prohibited from doing any surgery lasting longer than an hour. One morning one of my residents says, “Hey, Boss! Will you help me with a bilateral orchiectomy this afternoon?” I figured it was an old man with prostate cancer. I said, “Jimmy, tell me about the patient.” He said, “Well, Boss, he's a 37-year-old ...” I told him to stop right there—that we weren't cutting any 37-year-old's nuts off without some kind of order from way above my pay grade. He told me that the patient had had a thorough workup for testalgia, including a psych screen, and everything was in order. I said I wanted to meet this patient so we went to his room. Guess who? Right — the same guy from the Navy. I asked him if he knew who I was, and he said he did and asked me if he could go home.

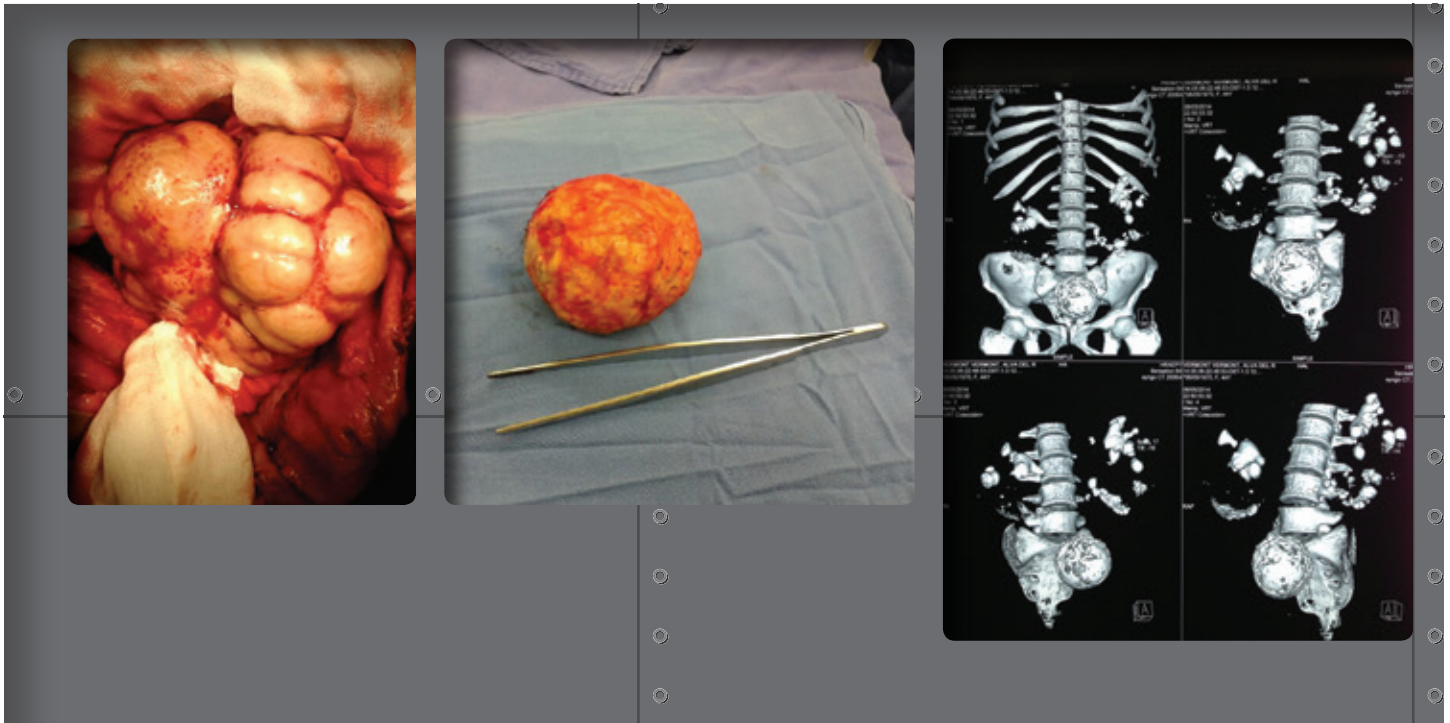
Michael McCarthy, MD — Carlsbad, California



WHAT'S UP DOC?

A 49 year old lady presented with a UTI unresponsive to oral antibiotics associated with passage of reddish urine. An IVU revealed a faintly opaque, sausage shaped foreign body within the pelvis measuring 8cm x 2.5cm and confirmed the object to be intravesical. (Fig 1) The patient was questioned about unusual sexual practises and admitted to allowing her husband to use a 'carrot' in her urethra to stimulate her during sex for the last 3 years. She denied any stress incontinence but admitted to marked urgency. Her MSU revealed *Enterobacter sakazakii* sensitive to Gentamicin. She was consented for a cystoscopy with video imaging under antibiotic cover with the probability of a small cystotomy to remove the large foreign body. At cystoscopy a “carrot” was found in the bladder. The proximal ‘head’ end of the carrot was too large to remove transurethraly. The “carrot” was successfully removed via a small cystotomy. (Fig 2)

Sanjeev Bandi, MD — Queensland, Australia



ROCKY ROAD

This was a 44-year-old woman with bilateral kidney stone disease and 10 years of chronic kidney disease. She was being treated with hemodialysis for two years due to end-stage kidney disease. A kidney transplant candidate, she underwent bilateral simple nephrectomy and was also programmed for a cystolithotomy because the CT scan reported what appeared to be a large bladder stone. However, it turned out to be a calcified uterine cyst. She coursed with a successful recuperation and was satisfactorily sent home scheduled for a renal transplant.

In the Yucatan peninsula, there is a very high incidence of hypocitraturia and kidney stones. It is the second cause of end-stage kidney disease after diabetes mellitus.

Rodrigo Suarez, MD — Merida, Yucatan, Mexico

TEACHABLE MOMENTS

A colleague, who years ago was my junior resident, called to say he was referring to me a problem he couldn't solve:

A handsome, slender, blue-eyed blonde school teacher showed me her Gantrisin pills and said that if she stopped them for even 24 hours, a painful, hemorrhagic cystitis would occur. Intercourse as a contributing cause had been long before ruled out, for even coitus was painful.

She brought with her an IVP that revealed as beautiful a rendition of normal upper tracts as I had ever seen. But there was something odd on the left. This ureter, as it approached the bladder, although small, became tortuous, as though it had been stretched at times. This was the first tip-off.

The infection story was unlike any I had ever heard. I needed to confirm this and under direct vision because it seemed to involve only the bladder, for high fevers suggesting kidney involvement had not occurred.

And then she described the sequence, which, on the surface, seemed to bear no relation to her bladder problems. Several months earlier, her left flank began to ache, and this had gradually increased severely. But in recent weeks, the ache extended into the left abdomen, and finally into the left pelvis, accompanied by tenderness so severe that intercourse had become painful. Any hope of having a pregnancy evaporated; the price was too high.

I then recognized that my years of experience were being put to a major test. The problem had to be solved. First I must verify the cystitis history. The patient was asked to stop the Gantrisin and come in to my office daily so that I could examine her urine myself. The first day, the urine was clear. The second day, the urine was bloody, and bacteria were on the smear. Her unlikely story was verified. Gantrisin was restarted.

Next came an office cystoscopy and the uncovering of a possible agent. The right ureteral orifice was quite normal and competent. The left orifice was strikingly different. It lay posterior, almost at the uterine prominence. It was small and flat without the usual trigonal support. Did it reflux, allowing bladder urine to seep into the ureter and upper tract? Two cystograms and an attempt to follow particles of methylene blue iodide into it did not reveal reflux.

I still had to rule out a kidney source for the bacteria, perhaps from an abscess. We did an aortogram, and the films were quite beautiful, giving the kidney itself a clean bill of health.

Pelvic examination revealed an exquisitely tender left lower quadrant, but without the suggestion of a mass.

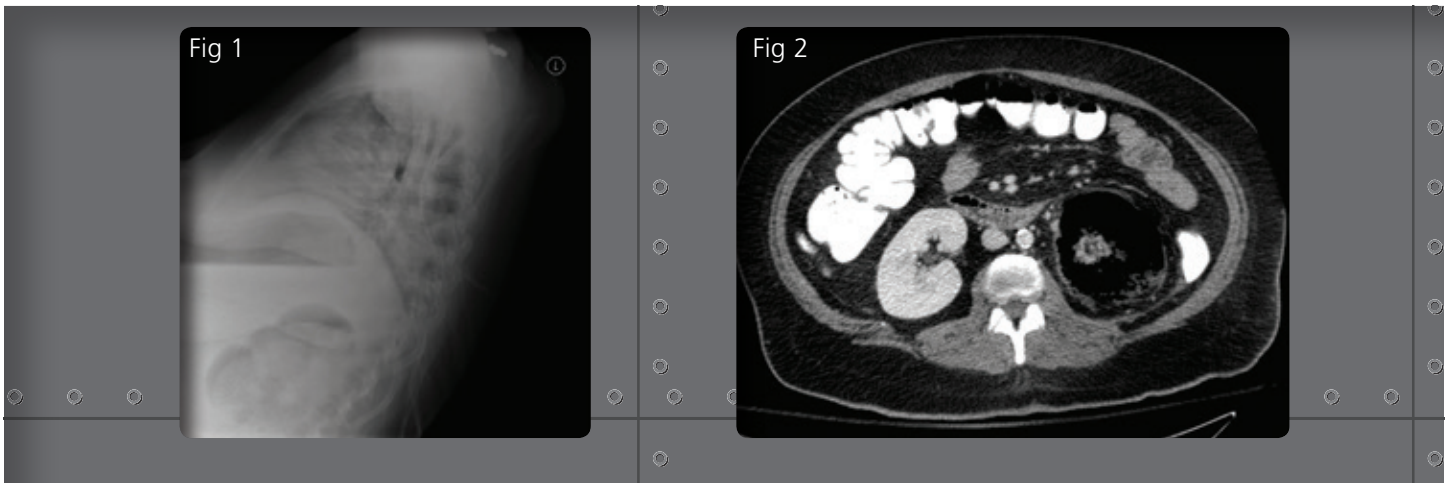
So I went back to the drawing board. The patient was insistent that I operate and take a look. There was simply no alternative. I said, "If I find a very long, small, stretched ureter encased in fibrosis which could include fibers of the sympathetic nervous system and thus account for the pain, it will be our best indication that you will be well." I was taking the chance that an experience with over 500 UVPs would carry the day.

At surgery, that is exactly what we found. The ureter, quite small, was like a long piece of spaghetti, but it had a striking fibrous encasement unlike any we had encountered before. We stripped it gently and reimplanted in the normal position in the trigone. Postoperative day found the pains no longer there, despite the operative intervention. The patient went home pain free. A week later I stopped the Gantrisin. Infection did not return. Long-term follow-up was a joy. I wonder now about that family.

But there was still a surprise in store for both of us. On her last visit, she said, "You didn't tell me about another thing that has happened. I now empty my bladder easily and in a steady stream." It can only be explained that the sympathetic trigonal fibers that can interrupt a stream were inactivated.

In summary, this experience served to solidify my respect for what a renegade sympathetic nervous system can do.

Richards Lyon, MD — Napa, California



WINDY KIDNEY

A 53-year-old woman with type 2 diabetes mellitus presented to the emergency department with altered mental status, hyperglycemia (blood glucose 647 mg/dl) and fever (102.3°F). Fever workup and treatment for sepsis and diabetic ketoacidosis ensued. The lateral chest x-ray revealed an air nephrogram (Figure 1), and computed tomography confirmed left emphysematous pyelonephritis with gas replacing most of the left kidney and tracking inferiorly within Gerota's fascia into the pelvis (Figure 2).

Management consisted initially of parenteral antibiotics and percutaneous placement of a retroperitoneal drain. Urine and perinephric cultures grew pan-sensitive *Escherichia coli*. Despite these measures, the patient remained persistently febrile, and follow-up imaging demonstrated only minimal improvement. The patient subsequently underwent left nephrectomy, after which she defervesced and improved.

Uncontrolled diabetes is a risk factor for emphysematous pyelonephritis, although it does not appear to increase mortality. Conservative management, when feasible, is preferred, though delayed nephrectomy is often necessary.

Figure 1. Lateral chest x-ray revealed an air nephrogram of the left kidney.

Figure 2. Severe emphysematous pyelonephritis of left kidney with replacement of the majority of the renal parenchyma with gas

Daniel A. Barocas, MD, MPH, FACS — Nashville, Tennessee

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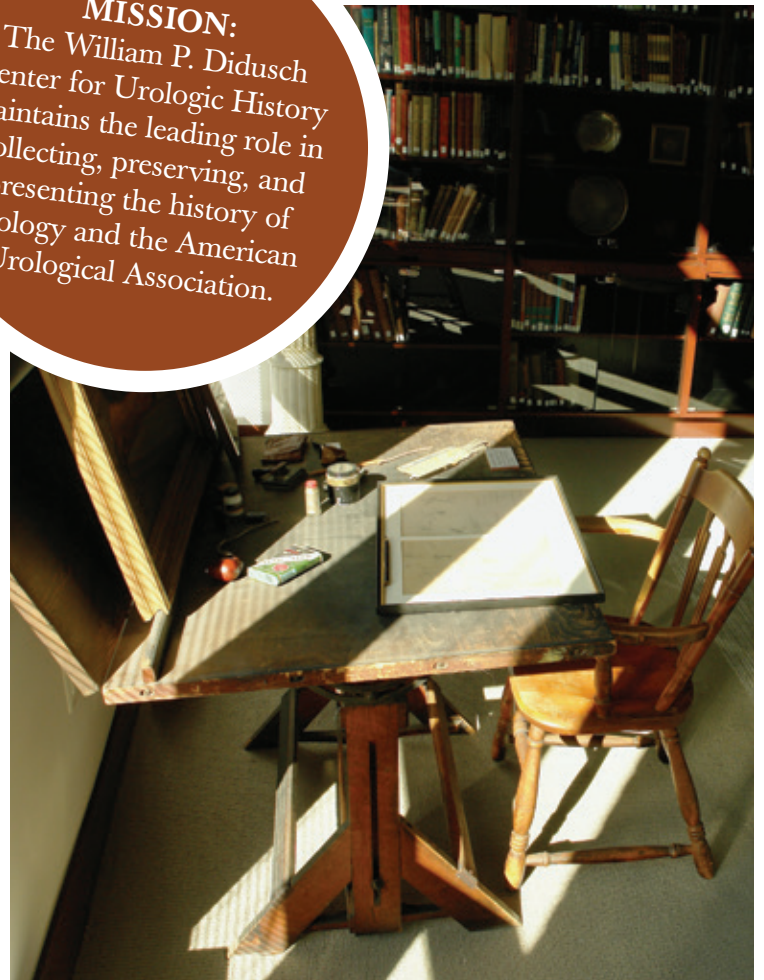
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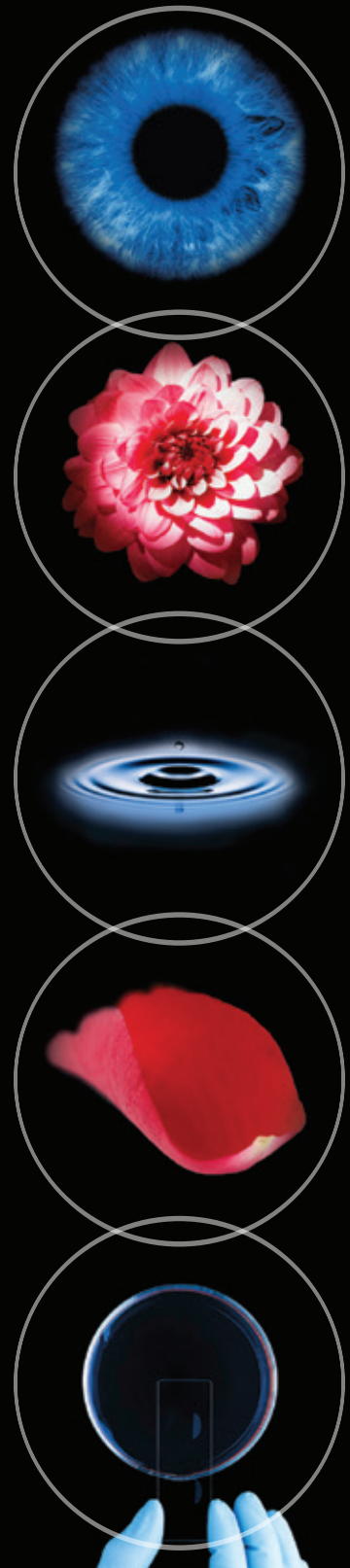
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UROLOGIC ODDITIES

BY WIRT B. DAKIN, MD

PREFACE, 1947

The purpose of this volume is to present my entire collection of unusual case reports as a medical reference book leavened with occasional humorous anecdotes. All of this material was generously contributed by surgeons and physicians from nearly every country in the world for a period of fifteen years. Although most of these histories were received from urologists, almost every medical specialty is represented either directly or indirectly.

This is the largest collection of foreign bodies in the genitourinary tract that has yet been reported. One is amazed at the number of queer adults in the world. There is, of course, a partial solution to such problems but the opinion is unprintable.

The encouragement, advice and aid of many leading urologists have been invaluable incentives to the completion of this work. I hope that the result will not disappoint them too much.

Grateful acknowledgment is made to William Didusch of Baltimore, internationally known surgical illustrator who for many years was in charge of all scientific exhibits at the American Urological Association, for his cooperation in arranging the exhibit material of this book at our medical society meetings.

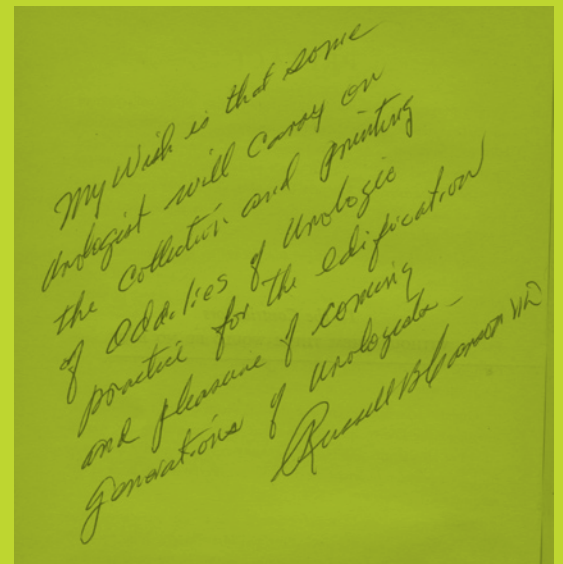
Special expression of appreciation is due to my secretaries, Miss Virginia Woods, Mrs. Marie Godfrey and Mrs. Blanche Isom for their faithful interest, loyalty and efficiency in assisting in the preparation of the series of "Believe-It-Or-Not"* booklets which were published in the past.

I wish particularly to express my gratitude to Ruth M. A. Preston of Los Angeles for her excellent editorial work and integration of an unusual and difficult manuscript.

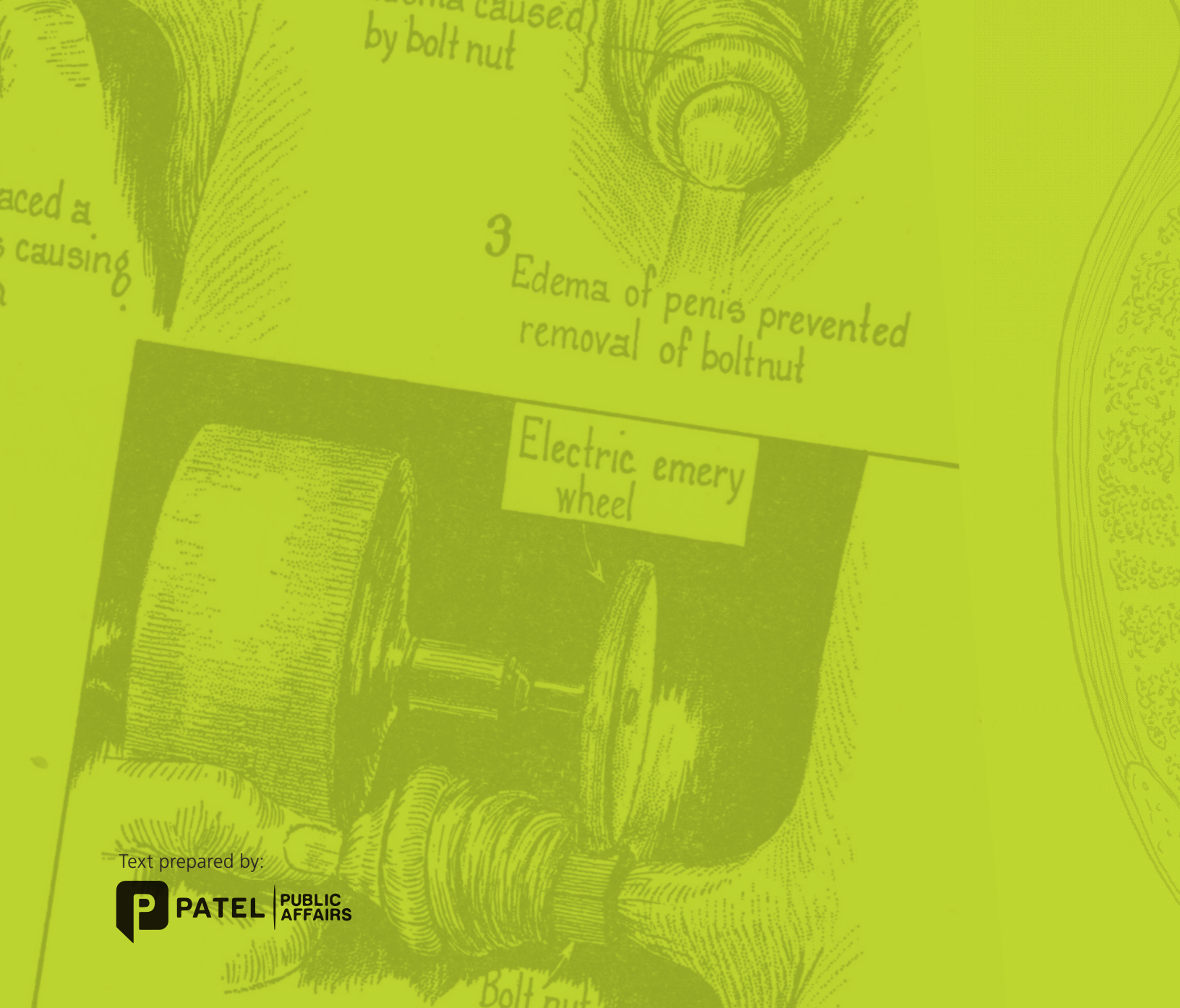
- W.B.D.



Wirt B. Dakin, MD
AUA Historian 1947 – 1965
And author of *Urologic
Oddities*, 1947



Written in the front of the William P. Didusch copy of *Urologic Oddities*.
William P. Didusch Center for Urologic History,
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