

Insertion of Foreign Bodies (polyembolokoilamania): Underpinnings and Management Strategies

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LESSONS LEARNED AT THE INTERFACE OF MEDICINE AND PSYCHIATRY

The Psychiatric Consultation Service at Massachusetts General Hospital sees medical and surgical inpatients with comorbid psychiatric symptoms and conditions. Such consultations require the integration of medical and psychiatric knowledge. During their twice-weekly rounds, Dr Stern and other members of the Consultation Service discuss the diagnosis and management of conditions confronted. These discussions have given rise to reports that will prove useful for clinicians practicing at the interface of medicine and psychiatry.

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Have you ever had to evaluate and manage a patient with polyembolokoilamania (inserting a foreign body into 1 body orifice or more)? Have you wondered why he or she did it and been surprised by your reactions to their behavior? If you have, then the following case vignette and discussion should prove useful with your approach to and management of patients who insert foreign bodies into themselves.

Although insertion of foreign bodies into bodily orifices is not uncommon, relatively little has been written about its predisposing factors, its complications, or its management. Care required is often collaborative, involving primary care physicians (who oversee the patient's care), surgeons (who assess the need for surgical removal or management of its complications, eg, perforated viscera), infectious disease specialists (re: infections), and psychiatrists (mental status and psychiatric assessment of reasons for foreign body insertion, eg, psychosis, self-injury, erotic pleasure, malingering, factitious illness).

In addition, such individuals and their behaviors evoke intense emotional reactions (eg, disgust, anger, embarrassment, fear) that threaten to interfere with medical care (eg, via avoidance, a lack of compassion or empathy, hostility). Psychiatric consultation may facilitate a greater understanding of the patient and his or her dilemma so that timely treatment and effective care can be initiated.

CASE VIGNETTE

Mr A, a 51-year-old man, brought himself to the emergency department (ED) when he was unable to remove a flower vase from his rectum. On several occasions he had inserted the same vase and had removed it without difficulty. Unfortunately, this time it had penetrated so far that he could not grip the edge and remove it. Months earlier, he had inserted a hanger into his rectum to remove the vase; this procedure led to rectal perforation that required an exploratory laparotomy and repair.

In the ED, examination revealed that the mouth of the glass was palpable and intact at the anal verge. A kidneys, ureter, bladder radiograph confirmed the presence of an 11.7 cm by 7.6 cm radioopaque foreign body within the rectum. Since it could not be removed under conscious sedation at the bedside, Mr A was sent to the operating room for an exploratory laparotomy and foreign body removal.

When asked why he inserted the vase, Mr A replied, in hushed tones, that he "would rather not get into it" and gestured toward the patient behind the curtain, as though he preferred not to be overheard. Later, he reported that over the past decade he had regularly inserted ("once every few months") a variety of household objects (including the plastic top of an aerosol container into his rectum [removed via anoscopy]) for sexual pleasure. He denied that foreign body insertion was ever an intentional self-injurious act. He identified himself as a heterosexual; however, he had never had genital intercourse.

He denied any active neurovegetative symptoms of depression but acknowledged that he had a bout of depression as a teenager. He also reported having social anxiety that improved dramatically with use of fluoxetine.

- Establishing the motivation for foreign object insertion helps to guide successful patient management.
- Patients should be counseled about harm-reduction strategies (including less dangerous means of object insertion).
- Staff reactions (eg, of perplexity, disgust, titillation) can impinge on compassionate care; reactions should be addressed so that the patient's problems can be unearthed and managed.

Mr A denied substance use or abuse or having been the victim of abuse or trauma. His medical history included asthma, glaucoma, scoliosis, a congenital deformity of his right arm, and an exploratory laparotomy for rectal perforation following insertion of a hanger.

His vital signs were stable. On mental status examination, he was awake, alert, oriented, comfortable (sitting up on the stretcher), and cognitively intact. His right arm had marked malformations (proximal and distal, including his hand and fingers). His mood was "good," but he appeared ashamed. There was no evidence of a thought disorder.

His laboratory values were notable only for a white blood cell count of 17.9 cells/mm³.

WHO INSERTS FOREIGN OBJECTS INTO BODILY ORIFICES?

Individuals who insert foreign objects into their own bodily orifices span disparate backgrounds, ages, and lifestyles. Children (under the age of 20 years) commonly swallow foreign bodies, accounting for approximately 80,000 cases each year; most of these are accidental ingestions in children between the age of 6 months and 4 years.¹ Younger boys swallow foreign bodies more often than do younger girls. In adolescents, intentional foreign body insertion often reflects risk-taking, attention-seeking, or poor judgment while under the influence of drugs or alcohol or as a manifestation of psychological abnormalities.² Adolescent girls with eating disorders (ie, bulimia or anorexia nervosa) exhibit a propensity for toothbrush swallowing.³ Adults who insert foreign objects often suffer from mental illness, harbor lingering curiosities that manifest as experimentation or as efforts to rekindle past experiences or relationships, or do so to enhance sexual stimulation.

WHAT DO PEOPLE INSERT INTO ORIFICES?

While the list of objects that patients insert into their orifices is long and sundry, most are common household objects (eg, beans, dried peas, popcorn kernels, hearing-aid batteries, raisins, beads, coins, chicken bones, fish bones, pebbles, plastic toys, pins, keys, buckshot, round stones, marbles, nails, rings, batteries, ball bearings, screws, staples,

washers, pendants, springs, crayons, toothbrushes, vases, razor blades, soda cans and bottles, silverware, hinges, telephone cable, and guitar picks).

WHICH ORIFICES ARE USED FOR FOREIGN BODY INSERTION?

Foreign bodies can enter the human body by swallowing (the mouth/upper gastrointestinal [GI] tract), insertion (eg, nose, ears, penis/urethra, vagina, rectum [lower GI tract], fistulas, ostomy sites), or traumatic force, either accidentally or on purpose.¹

WHAT COMPLICATIONS DEVELOP AFTER FOREIGN BODY INSERTION?

Once past the esophagus, the majority of swallowed foreign bodies pass through the alimentary canal without sequelae.⁴⁻⁷ However, in approximately 1% of patients⁴ operative interventions are necessary. The properties of involved objects often determine the complications associated with ingestion. Long, thin objects (especially if more than 1 object has been ingested)^{6,8} tend to have more difficulty traversing the GI tract and are more likely to become entrapped. Objects wider than 2 cm tend to lodge in the stomach (and do not pass the pylorus); objects longer than 5 cm tend to get caught in the duodenal sweep.^{6,9} In addition, risk of perforation (leading to peritonitis, abscess formation, obstruction, fistulae, hemorrhage, or even death) is associated with ingestion of sharp objects; therefore, these should be removed, even in asymptomatic individuals.^{4,7,10-12}

Of traumatic rectal injuries (perforating, nonperforating, and either intraperitoneal or extraperitoneal)¹³ seen in the ED, 19% were secondary to foreign body insertion. Although most foreign bodies fail to cause significant anorectal injuries, complications can arise from their insertion or removal, or from the content they introduce.¹⁴⁻¹⁷

The complications of foreign bodies inserted into the penis are generally evident; most affected individuals seek care for relief of pain (eg, from testicular torsion or scarring of the penis) or inability to void.¹⁸ Even when the penile skin appears dark or necrotic, reported salvage rates have been high.¹⁹⁻²¹ Similarly, foreign bodies inserted into the vagina, when not discovered in a timely fashion, may lead to complications of pelvic pain, urinary retention, damage to the bladder or intestines, or an infection with septic shock.²²

Complications of genitourinary (GU) foreign body insertion include acute cystitis, dysuria, urinary frequency, hematuria, and strangury.²³⁻²⁵ In addition, urinary retention, poor urinary stream, and swelling of the external genitalia may arise, along with ascending GU infections. Some patients experience tears of the urethra, with periurethral abscesses, fistulas, and urethral diverticula.^{23,26,27}

Complications of foreign bodies inserted into subcutaneous tissue are largely dependent on the type of object used along with the location of injury. Objects inserted into abdominal

Table 1. Differential Diagnosis of the Motivation for Foreign Object Insertion

Sexual gratification
Paraphilic disorder
Nonpathologic sexual preference
Nonsuicidal self-injurious behavior serving an emotional regulatory function
Borderline personality disorder more than other personality disorder
Mental retardation
Developmental disorder
Suicide attempt
Psychotic disorder (with or without mood disorder)
Direct result of delusion or command hallucination
Indirect result of impaired judgment
Depressive disorder with psychotic features
Factitious disorder
Malingering
Cognitive disorders
Substance intoxication
Dementia
Delirium
Circumstances not inherently indicative of psychopathology
Exploratory misadventure
Sexual assault or prank
Drug concealment ("body packing")
Misguided attempt at self-contraception, abortion, or self-treatment

tissue carry the risk of stomach or bowel perforation, while insertion into the extremities may result in abscess formation or nerve injury; these may result in permanent functional impairment.

WHY DO PEOPLE INSERT FOREIGN OBJECTS INTO THEMSELVES?

Establishing the motivation for foreign object insertion is crucial to successful patient management (Table 1). This may be facilitated by eliciting the patient's description of the psychological circumstances (mental state) preceding the insertion, by comparing the intended and actual effects of the insertion, and by taking a general psychiatric and developmental history.

Sexual Gratification

Sexual gratification is commonly reported by patients (and accepted by clinicians) as the reason for autoerotic or consensual sexual acts involving the insertion of foreign objects into the erogenous zones of the urethra,^{23,24,28–30} vagina,³¹ or rectum.³² However, there are reasons to take a wider view and resist equating these insertion activities with mere orgasm-seeking behavior. Psychoanalysts have long observed that psychosexual energy (libido) can become invested in actions that do not lead directly to orgasm, such that some behaviors may be primarily reinforced by a compelling emotional payoff that has become layered upon a secondary outcome of orgasm, or occurs in the absence of orgasm.³³ This insight prompts a search for less reductionistic explanations of behaviors with complex psychological origins. A deeper understanding of the patient's situation may also distinguish between nonpathologic sexual preferences and the paraphilic disorders. When a patient's sexual history reveals a pattern of recurrent behaviors, fantasies, or urges

involving nonhuman objects that causes significant distress or functional impairment, a paraphilic disorder (fetishism) may be diagnosed.³⁴ Foreign object insertion resulting in sexual gratification linked with a sense of being made to suffer suggests another paraphilic disorder (masochism). While the diagnostic approach of the *Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition, Text Revision³⁴ to sexual disorders exemplifies a "disease model," other perspectives within psychiatry emphasize the social construction of paraphilic behaviors. A clinician who employs multiple theoretical approaches would consider whether the insertion behavior represents a nonpathologic sexual preference, reflective of the diversity of human behavior, and not a "disease."³⁵

Nonsuicidal Self-Injurious Behavior

Nonsuicidal self-injurious behavior serving an emotional regulatory function is strongly associated with borderline personality disorder (BPD). Such behavior can take the form of foreign body insertion (eg, 76 needles and hair pins self-inserted under the skin of a woman's arms, head, and neck, which required surgical excision,³⁶ or straightened paper clips inserted into the forearm³⁷). Nonsuicidal self-injurious behavior in the context of BPD seeks to modulate unbearable emotions, to externally mark for oneself or others an internal experience of being "bad," to feel physical pain, or simply to feel.³⁸ Foreign body insertion may play a similar emotional regulatory role for those with other personality disorders,²⁹ mental retardation,³⁹ or developmental disorders (eg, Smith-Magenis syndrome⁴⁰).

Suicide Attempt

Suicide attempts by foreign body insertion usually involve oral ingestion of toxic solids (eg, batteries or sharp objects such as pins).^{41–43} Suicidal insertions through other routes (eg, transurethral insertion of a cylinder resulting in bladder perforation⁴⁴ and transnasal intracranial insertion of a ballpoint pen⁴⁵) have been reported.

Psychosis With or Without Mood Disturbance

Psychosis with or without mood disturbance can lead to foreign object insertion (either directly in response to a delusional belief or command hallucination or indirectly via impaired judgment).²² Atypical psychotic states devoid of mood symptoms can lead to foreign object insertion, as with a monosymptomatic hypochondriacal delusion about having a urethral stricture that led a man to insert knitting needles to overcome the feared stricture.⁴⁶

Depressive Disorder With Psychotic Features

Depressive disorder with psychotic features has been reported in association with more bizarre insertions (eg, ingestion of 50 pins⁴¹ and insertion of needles through the chest wall⁴⁷). Recurrent depressive illness without psychosis

has also been diagnosed in some insertions leading to hospital attention.^{30,48}

Factitious Disorder

Factitious disorder (marked by the deliberate production of physical or psychiatric symptoms or signs to obtain the sick role)⁴⁹ has been manifest by rectal insertion of a glass bottle neck⁵⁰ in the context of similar presentations for feigned or simulated illness, peregrination (wandering or traveling), and pseudologia fantastica (pathological lying); endoscopic retrieval detected that the object had been packed with paper, likely by the patient to afford himself some protection from internal trauma.

Malingering

Malingering (where physical or psychiatric symptoms or signs are intentionally feigned or produced to achieve tangible “secondary gain,” such as disability benefits, shelter, or avoidance of military duty or legal consequences) occurs most often in men between adolescence and middle age. One illustrative example of malingering and social contagion⁵¹ involved 6 males (3 met criteria for antisocial personality disorder and 3 for BPD) living in a maximum-security hospital who copied each other’s urethral self-insertion technique in a deliberate attempt to control hospital staff. All 6 inserters reported that their behavior released tension, while the initial inserter reported a sadistic fantasy during insertion in which he imagined the damage being inflicted to the urethras of other people.

Cognitive Disorders

Cognitive disorders may lead to foreign object insertion or influence its course. In one case series of 17 men who presented with urethral insertion, substance intoxication was detected in 6 men.⁵² Dementia and delirium causing confusional states may similarly complicate the course of foreign object insertion, as occurred in a woman who inserted a pencil into her urethra while masturbating; it slipped into the bladder causing perforation.⁵³

Finally, foreign bodies may be inserted for reasons not inherently psychopathological. These include nonpathologic sexual preference; exploratory misadventures occurring in children as isolated acts driven by simple curiosity^{54–57}; insertions by other people during sexual assaults or pranks^{58–61} (eg, a man’s friends inserted tennis wire into his urethra at a stag party and another man’s roofing colleagues forced cylindrical rolls of tar into his urethra to have fun at his expense); drug concealment or smuggling^{62,63}; and misguided attempts at contraception, abortion, or self-treatment of anal or urinary symptoms.^{64,65}

WHERE DO PEOPLE INSERT FOREIGN OBJECTS?

Although case reports of foreign body insertion are not uncommon, only a few large reviews on the subject exist;

most were written before 1950.^{66–69} In 1880 Poulet⁶⁷ included several chapters on the topic in his book, *A Treatise on Foreign Bodies in Surgical Practice*, and in 1897 Packard⁶⁶ reported 221 cases of foreign bodies introduced into the male bladder (via the urethra). How people insert, embed, or ingest foreign bodies depends largely on the type of objects used, and the anatomic location of the object’s placement.

Upper Gastrointestinal Tract

Upper GI tract foreign body ingestions are more common in those who are either young, have comorbid drug or alcohol use histories, have psychiatric illness, or are prisoners.^{4,10,70} Most published studies indicate that the majority of ingestions in the pediatric and adult populations (52% and 97%, respectively) are accidental. However, Palta and colleagues^{71–74} found that 92% of intentional ingestions occurred in patients with psychiatric problems and were associated with similar prior presentations. Intentionally ingested items were typically common household items (eg, pens, plastic spoons, toothbrushes, or pencils), whereas accidentally ingested items were often food impactions, bones, or coins.^{74,75}

Lower Gastrointestinal Tract

Smiley (in 1919)⁷⁶ published one of the earliest reports of foreign body insertion into the rectum; it involved a glass tumbler. Since then the incidence of colorectal foreign body insertion has been increasing; it is no longer considered an uncommon reason for ED care.⁷⁷ Kurer and colleagues’ review⁷⁸ noted that the ratio of men to women with foreign body insertion was 37:1. They also reported that sexual arousal was the reason for nearly half of cases, while personal care or self-treatment of constipation, hemorrhoids, and pruritus ani resulted in 25%, 12% were due to assaults, and 9% were due to “accidents.”⁷⁸ Other reasons included psychosis (5%) and the consequences of drunken wagers.⁷⁸ Similar to the pattern seen with upper GI insertions, the most common objects inserted into the lower GI tract were household objects (mainly bottles of various sizes and shapes, and drinking glasses).

Vagina

Many reports of foreign bodies placed into the vagina involve children and are usually associated with premenarchal vaginal discharge or sexual abuse.⁷⁹ In adults, vaginal foreign bodies are primarily described in the gynecologic literature and have not been associated with mental illness; instead, they are linked with drug smuggling and with sexual stimulation.^{62,80} Nonetheless, insertion of foreign objects by women with psychiatric illness has been described.^{22,81}

Genitourinary Tract

The medical literature contains a vast array of case reports of foreign bodies (including fish hooks, glass stirrers, a coyote’s rib, a razor blade, and even a 45-cm decapitated snake) inserted into the GU tract.^{26,82–87} In addition, almost

every household tool or appliance that is physically capable of being inserted into the urethra has also been described.⁶⁷

While most cases have been associated with self-exploration and with increasing sexual pleasure, some reports feature contraceptive efforts (eg, sealing the meatus by gum or candle wax), drug intoxication (intraurethral administration of cocaine), violence or assault, gastrovesical fistulas, or accidental insertion (objects, such as thermometers, propelled into the bladder by inadvertent insertion into the urethra).^{88–95} Foreign bodies (including umbilical tape after a cesarean section, parts of a surgical glove, bone cement, and even a pacemaker generator) linked to medical intervention have also been described.^{83,96–98}

Subcutaneous Tissue

Case reports of foreign body (eg, staples, pencil lead, crayon, pins, sewing needles, glass, and teeth from a comb) insertion into the soft tissues of the hand, arm, foot, leg, buttocks, groin, abdomen, breast, heart, neck, and orbit have been described.^{37,99–109} Most cases are associated with the self-injurious behavior characteristic of BPD; however, some cases have been thought secondary to Munchausen's syndrome or syndromes involving secondary gain.^{5,99}

HOW OFTEN DO PEOPLE INSERT FOREIGN OBJECTS INTO THEMSELVES?

The actual prevalence of foreign object insertion in the general population or in specific psychiatric populations is unknown. However, many of those who seek medical attention on account of foreign object insertion report a history of the same behavior. A smaller but significant proportion have a history of medical complications from foreign object insertion, suggesting that developing medical complications and being hospitalized are insufficient to arrest insertion activity.

In one series of 17 men seeking management following urethral foreign object insertion, all reported a history of urethral insertions.⁵² In another case series of 38 patients with GI foreign body insertion, 8 patients had been previously evaluated for the same problem.⁵⁸ One study of a specific psychiatric population (ie, mental retardation) supported the conclusion that incidents of foreign object insertion are likely to be followed by subsequent insertions.³⁹ These data are consistent with our patient, Mr A, who reported a history of recurrent insertion activity over 4 decades and who had presented twice before due to medical complications related to this activity.

HOW DOES STAFF REACT TO PATIENTS WHO INSERT OR INGEST FOREIGN BODIES?

As both Bibring¹¹⁰ and Groves¹¹¹ have remarked, if an appropriate relationship cannot be established between the patient and the physician, it is not always because the physician does not understand the patient, but because the

Table 2. Goals of Psychiatric Consultation for Foreign Object Insertion

Diagnosis
Minimize harm to the patient during the hospital course
Evaluate the risk of imminent insertion in the inpatient setting
Identify any underlying syndromal psychiatric illness
Identify and contain countertransference reactions of staff
Treatment
Minimize harm to the patient after discharge
Minimize anxiety and shame associated with the experience of being exposed
Counsel patients about harm-reduction strategies and less dangerous means of insertion
Consider referral to outpatient psychiatric treatment (including psychotherapy)

physician does not understand his or her own reaction to the patient. Reactions by hospital staff to patients who insert foreign bodies are varied, ranging from genuine concern to revulsion and avoidance. As has been described in patients with self-mutilation, medical or surgical house staff who care for patients with foreign body insertion may experience dysfunctional behavior, clouded cognition, and labile affects, either due to disruptive patient behavior or due to the uniqueness of their medical or surgical presentation.¹¹²

Undoubtedly, some cases awaken “morbid curiosity” and titillation within staff, leading to breaches of privacy (by discussion of the case by staff members with individuals not involved in the care of the patient, or, in cases of “shocking” radiologic images, inappropriate distribution of digital images via cell phones or the Internet).

Consultation psychiatrists may assist in averting these potentially harmful outcomes by providing education and awareness of common countertransference reactions.

HOW CAN SUCH INDIVIDUALS BE INTERVIEWED, MANAGED, AND PROTECTED FROM REPEATED INJURIES?

Rationale for Psychiatric Consultation

At present there is no consensus about when psychiatric consultation should be sought (or what it should involve) for the management of patients admitted for foreign object insertion. Some have suggested that consultation should be ordered on a case-by-case basis, appropriate only for patients with a history of psychiatric problems^{30,58} or for cases involving unusual foreign objects or a history of foreign object insertion.^{113–115} However, psychiatric problems associated with insertion behavior may go unidentified without routine psychiatric consultation,⁵² leading to the recommendation for prompt psychiatric evaluation for all who self-insert foreign objects.¹¹⁴

Given the benefits of elucidating the behavior's motivation for guiding management, we suggest that psychiatric consultation should be obtained in all cases of foreign object insertion resulting in hospitalization (Table 2) so that care can be optimized. By doing so, psychiatric problems that may have contributed to the insertion behavior can be identified

and treated. Even in the absence of psychiatric illness, harm-reduction strategies may be taught to psychologically normal individuals who embrace the insertion behavior as a lifestyle preference.

In addition, psychiatric consultation may minimize harms associated with traumatic affective states caused by interactions with the hospital and its staff. Numerous reports attest that anxiety and shame are commonly experienced by inserters (particularly those who do so for sexual gratification) on initial presentation to the hospital.^{46,52,115} Since the statement “I feel ashamed” often means “I do not want to be seen,”³³ inserters who feel ashamed typically hide their faces (and their stories) from inquisitive staff because being looked at is readily equated with being despised.

Mr A initially declined opportunities to explain his insertion behavior to the primary team, leading them to seek psychiatric consultation. He waved off the psychiatric consultant when he initially arrived. He hid his face from the gaze of those passing through the room, telling the consultant that being looked at felt like “being frowned upon.” As an unexpectedly lengthy (17 day) hospital course (complicated by postoperative ileus) wore on, Mr A became aware that staff talked about him (with titillation and disgust) within his earshot. He began to dread daily rounds by the primary team and nurse encounters. He reported feeling more anxious and ashamed—even when no external audience was present—and he became less receptive to conversations with anyone.

Countertransference reactions by caretakers may intensify unpleasant affective experiences of inserters during the hospital course. Staff reactions of perplexity, disgust, and titillation in regard to Mr A appeared to stem from the discovery that he practiced a sexual behavior considered perverse. In a large-scale repetition of earlier shame-inducing discoveries of Mr A's behavior, x-rays showcasing the flower vase circulated around the hospital to (and possibly by) staff not directly caring for him.

An important and underappreciated function of the psychiatric consultant in a case such as ours is to attend to—and mitigate the harmful effects of—inserters' affective experiences and staff countertransference reactions as the insertion behavior is “exposed” during the hospital experience.

Principles of Interviewing

From the outset, the patient should be approached with attention paid to his/her subjective experience about the behavior and the hospitalization itself. The consultant should do the following.

Titrate the duration, frequency, intensity, and setting of consultation visits to the patient's level of anxiety and shame. Regular, predictable, brief visitations may diminish anxiety about discussing the insertion behavior, which may seem equivalent to being “caught in the act.” If shame is apparent during the initial encounter, the physical setting may be altered to put the patient more at ease. Drawing a curtain around Mr A's bed blocked visual exposure to the

gaze of passersby, but his speech remained audible to his roommate. Arranging for a private office down the corridor from his room enabled Mr A to speak with less discomfort.

Review initial and all subsequent iterations of the insertion behavior. What were the psychological circumstances (fears, wishes, feelings) surrounding the initial insertion? What have been the intended effects of the behavior, as compared with its actual effects? Has the behavior progressed in frequency, size, and type of objects used or its effect on the patient? What does the patient think has shaped or reinforced the behavior over time? How does the patient feel about the behavior now?

Review prior presentations to medical care. Have there been medical complications of the behavior in the past? Has the patient previously delayed or avoided presentation for medical attention? How did the patient experience prior hospitalizations—did he/she feel ashamed, cared for, or judged?

Elicit a psychosexual history as part of the general social and developmental history. What are the patient's preferred sexual practices and masturbatory fantasies? What are his/her actual sexual relationships with others? Is there a history of sexual abuse or trauma? What level of sexual education has the patient received? These matters may be particularly important in regard to urethral and rectal insertions, as there is anecdotal evidence that insertion by these routes may be correlated with telltale psychosexual themes (including sadistic fantasies, isolation, and a perception of having had an overbearing parent).^{51,85} Psychoanalysts have long observed that certain character traits are preponderant in persons whose sexual life is oriented around a particular erogenous zone (eg, commitments to parsimony and orderliness in those with urethral erotic aims, and sadistic fantasy and marked shame in anally-oriented individuals).¹¹⁶

Relate to the patient's explanation of the behavior in a symbolic as well as literal sense. To the symbolically attuned consultant, Mr A's description of “being filled up” by the inserted object was an accurate mechanistic description of the insertion itself, but also hinted at its powerful affective reward—transient, fleeting relief from a chronic painful sense of loneliness and emptiness.

Consider staff's countertransference reactions, including one's own. Especially in cases of foreign object insertion performed for sexual gratification, the psychiatric consultant should remain alert to stumbling into a countertransference mine field marked by aversive feelings (eg, disgust and titillation) and labels of a patient or behavior as “perverse.” Both are linked implicitly to judgments about what constitutes “normal” or “correct” preference, which may jeopardize one's ability to search empathically for the function of the insertion behavior and its meaning within the patient's symbolic world. The act of labeling foreign object insertion “perverse” may be more usefully viewed as a countertransference signal that our own disapprobation or disavowal may be limiting our empathic understanding of the patient's situation.

CASE VIGNETTE, CONTINUED

Guided by these principles, the consultant obtained additional history. Mr A was raised primarily by his mother, while his father maintained an active sexual life outside of the marriage. Mr A reported conflicted feelings toward his mother, fancying himself as her protector and as her victim. He viewed her as “emotionally incestuous” toward him, for she lacked other primary relationships. Surprisingly, Mr A had no explanation for his prominently malformed limb; he had never asked his mother about it, out of a sense that “it would be too sad for her to talk about.”

Since leaving his mother's home in his late twenties, Mr A's life was marked by persistent loneliness. He had no visitors during his hospitalization. He lived alone in a boarding house and maintained few social contacts. He no longer felt close to his mother. He said that he had become someone who preferred “to follow rather than to lead.”

Mr A identified himself as heterosexual, preferring sex with only women, but he had never had genital intercourse. He began inserting objects into his rectum as an adolescent, but said he had “blanked out” his earliest reasons for trying out this behavior. On one occasion, his mother “caught him in the act.” A recurrent emotional experience of longing preceded each insertion, which he described as “a feeling of needing to be filled up.” While the act of insertion was initially painful, this typically gave way to “a relief of tension” and a “pleasure of having it in him.” These latter sensations were short-lived and were usually followed by intense anxiety and shame. Only rarely did he experience orgasm associated with the insertion. On a few occasions, he had asked a woman (who was “just a friend”) to insert the objects for him. He was unaware of commercial products that were available for the purpose of anal stimulation.

Previous encounters with the health care system on account of his insertion behavior augmented his shame. He denied any similarity between his mother's initial discovery of his behavior decades ago and the recent discoveries by his doctors on each presentation to the hospital. He said that it was his anxiety about others discovering his behavior that had prevented him from entering sex shops to purchase safe insertion toys and from presenting promptly for medical attention on previous occasions when he realized he could not remove the inserted objects. Though he had been anticipating over the preceding weeks that he would again require medical attention sooner or later, he said he “would have done anything to avoid coming here again.”

Protecting Patients From Repeated Injury

The possibility of imminent and long-term repeated injury due to recurrent foreign body insertion in the following manner should be addressed.

Evaluate the risk of imminent recurrence of foreign object insertion in the inpatient setting. This means removing foreign bodies present in the hospital milieu that could be used in repeated injury, as well as treating any acute

psychiatric illness that may predispose to such behavior. One 24-year-old woman with BPD who inserted 76 needles and hair pins into the skin of her head, neck, and lower arms continued to incorporate new foreign bodies following surgical excision,³⁶ suggesting that those for whom insertion is a means of regulating painful affects may be at particular risk of imminent repeated self-injury. A one-to-one sitter at the bedside may be needed to protect patients from repeated inpatient insertions.

Counsel patients about harm-reduction strategies (including less dangerous means of insertion). Deaths have been reported from inherently unsafe autoerotic foreign body insertion practices (eg, vaginal insertion of a carrot causing fatal air embolism, urethral insertion of a lead pencil causing bladder perforation and peritonitis, and rectal insertion of a shoe horn causing anal canal laceration and hemorrhage).^{31,117} Patients may be unaware of the existence of products designed for the safe pursuit of sexual gratification by foreign object insertion. Mr A eventually accepted a listing of local sexual novelty shops offering these products.

Treat underlying psychiatric factors that predispose to recurrent insertion. Specific pharmacologic approaches may be indicated for acute psychiatric problems (such as psychosis, mania, and depression) amenable to medication management. Patients with recurrent self-injurious insertions serving an emotional regulatory function may be assisted in establishing initial contact with treatment teams that specialize in behavioral treatment of recurrent self-harm.³⁷ For patients who do not meet criteria for syndromal psychiatric illness, psychotherapy may be suggested to provide a means of ongoing “exposure” to and “working through” of shame or other traumatic affective states brought on by the insertion or by hospitalization itself. However, many inserters decline referral to psychiatric follow-up at the time of discharge.³⁰

Emphasize prompt presentation to medical attention following any future injury. Individuals incurring injury from foreign body insertion often delay their presentation to the hospital once injury has resulted, usually out of a wish to avoid embarrassment or guilt.⁵² Upon entering the hospital, some remain reluctant to inform primary teams about what has happened, further delaying diagnosis and definitive intervention.²⁸ This sort of avoidance has resulted in death due to otherwise manageable injuries following foreign object insertion.^{24,32} Those fortunate to recover from medical complications of foreign object insertion should thus be explicitly reminded before discharge to seek medical care immediately if they sustain subsequent injuries.

CASE DISCUSSION

Mr A's rectal foreign body insertion could well have been a consequence of several conditions. Common potential etiologies include sexual gratification, self-injury (to inflict pain, embarrassment, punishment [possibly to alleviate mental anguish]), psychosis (eg, to obey command hallucinations or to diminish some perceived bizarre threat

through that bodily territory), reexperience of nostalgic memories with high affective valence, compulsivity (eg, to relieve anxiety associated with not performing this activity), and factitious illness (ie, to become a patient with a dramatic arrival to the health care system).

While sexual gratification seems to have been the primary motivation for Mr A's rectal insertion of a foreign body (as he himself stated), other features of the case suggest that additional factors were in operation. Unconscious factors must also have reinforced the escalating insertion behavior—such as a wish to relive a complex experience of closeness with his mother, whom he dearly loved—but whom he also experienced as having inserted herself into his life in an “incestuous” manner. Early conflict between these feelings may have led to difficulty in separating from her (as this did not occur until his late 20s) and to an unstable self-image prone to profound bursts of shame. His earlier shame-ridden experience of being discovered by his mother while a teenager seems to have been repeated in a series of similarly shaming presentations to the attention of hospital staff, brought on by his own choices that posed unclear meaning to him. Thus, in addition to being sexually gratifying, Mr A's escalating foreign object insertion may have been a factitious, unconsciously motivated revisiting of a prior relationship with powerful, complex affective valence.

The consultant identified 2 potentially useful interventions: (1) to reduce the harm of future foreign object insertion, given the likelihood that the behavior would recur, and (2) to mitigate the shaming effect of the hospital experience, so that it might begin a working through of his complex emotional experience around the insertion behavior rather than a mere repetition of prior shame-inducing exposures earlier in life. The 2 aims were related insofar as Mr A needed to tolerate thinking and talking about the insertions in order to become receptive to harm-reduction interventions and any indicated treatment recommendations.

Planned, brief, confidential visitations by the consultant gradually led to a more complete understanding of the function of the insertion behavior, as Mr A spoke about his mother, his loneliness, and his wish to feel less empty inside. He was counseled on ways to equip himself with safer means of sexual gratification, but he identified shame as a substantial barrier to availing himself of these harm-reduction strategies. The consultant eventually referred him for psychotherapy due to the distressing impact of the insertion behavior and the hospitalization. Psychotherapy was explained as a setting in which he might be gradually exposed to, and eventually learn to tolerate, overwhelming thoughts and feelings related to his hospital experience, insertion behavior, and upbringing by his mother.

CONCLUSION

Insertion of foreign objects into bodily orifices occurs as a result of a variety of psychosocial and psychiatric states. Unfortunately, such behavior exposes the affected

individual to medical morbidity (eg, complications of object insertion, surgical removal, and its aftermath). Unearthing the etiology for foreign body insertion can lead to management strategies that target the motivation for the behavior without the infliction of bodily harm. Staff reactions (fraught with fear, shame, anger, derision, scorn, and perplexity) to such behaviors are often intense and can impinge upon compassionate care. Timely psychiatric assessment (in addition to assessment and treatment of medical surgical complications) is of paramount importance. Failures to address the underlying cause will very likely lead to an individual's remaining at increased risk of repeated occurrences.

REFERENCES

1. Polsdorfer JR, Gale T. Foreign objects. Gale Encyclopedia of Children's Health, 2006. <http://www.healthline.com/galecontent/foreign-objects>. Accessed May 24, 2011.
2. Connors GP. Pediatric foreign body ingestion. <http://emedicine.medscape.com/article/801821-overview>. Accessed May 24, 2011.
3. Riddlesberger MM Jr, Cohen HL, Glick PL. The swallowed toothbrush: a radiographic clue of bulimia. *Pediatr Radiol*. 1991;21(4):262–264.
4. Eisen GM, Baron TH, Dominitz JA, et al; American Society for Gastrointestinal Endoscopy. Guideline for the management of ingested foreign bodies. *Gastrointest Endosc*. 2002;55(7):802–806.
5. Young AS, Shiels WE II, Murakami JW, et al. Self-embedding behavior: radiologic management of self-inserted soft-tissue foreign bodies. *Radiology*. 2010;257(1):233–239.
6. Webb WA. Management of foreign bodies of the upper gastrointestinal tract: update. *Gastrointest Endosc*. 1995;41(1):39–51.
7. Vizcarrondo FJ, Brady PG, Nord HJ. Foreign bodies of the upper gastrointestinal tract. *Gastrointest Endosc*. 1983;29(3):208–210.
8. Velitchkov NG, Grigorov GI, Losanoff JE, et al. Ingested foreign bodies of the gastrointestinal tract: retrospective analysis of 542 cases. *World J Surg*. 1996;20(8):1001–1005.
9. Chang JJ, Yen CL. Endoscopic retrieval of multiple fragmented gastric bamboo chopsticks by using a flexible overtube. *World J Gastroenterol*. 2004;10(5):769–770.
10. Stiles BM, Wilson WH, Bridges MA, et al. Denture esophageal impaction refractory to endoscopic removal in a psychiatric patient. *J Emerg Med*. 2000;18(3):323–326.
11. Islam SR, Islam EA, Hodges D, et al. Endoscopic removal of multiple duodenum foreign bodies: an unusual occurrence. *World J Gastrointest Endosc*. 2010;2(5):186–189.
12. Cho HJ, Kim JY, Lee HC, et al. An impacted clamshell in the duodenum mistaken for a gall stone. *Korean J Intern Med*. 2007;22(4):292–295.
13. Yacobi Y, Tsivian A, Sidi AA. Emergent and surgical interventions for injuries associated with eroticism: a review. *J Trauma*. 2007;62(6):1522–1530.
14. Steinman E, Cunha JC, Branco PD, et al. Traumatic rectal injuries. *Arq Gastroenterol*. 1990;27(3):120–125.
15. Hellinger MD. Anal trauma and foreign bodies. *Surg Clin North Am*. 2002;82(6):1253–1260.
16. Fry RD. Anorectal trauma and foreign bodies. *Surg Clin North Am*. 1994;74(6):1491–1505.
17. Couch CJ, Tan EG, Watt AG. Rectal foreign bodies. *Med J Aust*. 1986;144(10):512–515.
18. Bhat AL, Kumar A, Mathur SC, et al. Penile strangulation. *Br J Urol*. 1991;68(6):618–621.
19. Snoy FJ, Wagner SA, Woodside JR, et al. Management of penile incarceration. *Urology*. 1984;24(1):18–20.
20. McLaughlin T, Coyner W. Removal of a strangulating metal bearing from the penis. *J Urol*. 1989;141(3):617.
21. Vähäsarja VJ, Hellström PA, Serlo W, et al. Treatment of penile incarceration by the string method: 2 case reports. *J Urol*. 1993;149(2):372–373.
22. Melamed Y, Dalyahu Y, Vaiman R, et al. Foreign objects in the vagina of a mentally ill woman: case series. *Gen Hosp Psychiatry*. 2007;29(3):270–272.

23. Bedi N, El-Husseiny T, Buchholz N, et al. "Putting lead in your pencil": self-insertion of an unusual urethral foreign body for sexual gratification. *JRSM Short Rep.* 2010;1(2):18.
24. van Ophoven A, deKernion JB. Clinical management of foreign bodies of the genitourinary tract. *J Urol.* 2000;164(2):274–287.
25. Rafique M. Intravesical foreign bodies: review and current management strategies. *Urol J.* 2008;5(4):223–231.
26. Ali Khan S, Kaiser CW, Dailey B, et al. Unusual foreign body in the urethra. *Urol Int.* 1984;39(3):184–186.
27. Trehan RK, Haroon A, Memon S, et al. Successful removal of a telephone cable, a foreign body through the urethra into the bladder: a case report. *J Med Case Reports.* 2007;1(1):153.
28. Taori K, Saha B, Shah D, et al. Sonographic detection of Indian grass (*Sorghastrum nutans*), an unusual foreign body, in the urinary bladder. *J Clin Ultrasound.* 2007;35(3):174–175.
29. Costa G, Di Tonno F, Capodiceci S, et al. Self-introduction of foreign bodies into the urethra: a multidisciplinary problem. *Int Urol Nephrol.* 1993;25(1):77–81.
30. Forde JC, Casey RG, Grainger R. An unusual penpal: case report and literature review of posterior urethral injuries secondary to foreign body insertion. *Can J Urol.* 2009;16(4):4757–4759.
31. Marc B, Chadly A, Durigon M. Fatal air embolism during female autoerotic practice. *Int J Legal Med.* 1990;104(1):59–61.
32. Waraich NG, Hudson JS, Ifikhar SY. Vibrator-induced fatal rectal perforation. *N Z Med J.* 2007;120(1260):U2685.
33. Fenichel O. *The Psychoanalytic Theory of Neurosis.* New York, NY: WW Norton & Co; 1945.
34. American Psychiatric Association. *Diagnostic and Statistical Manual for Mental Disorders*, Fourth Edition, Text Revision. Washington, DC: American Psychiatric Association; 2000.
35. Linbeck M, Potteck T, Hinck D, et al. Urinary retention with ruptured fornix caused by a maggot: an autoerotic accident. *Urologe A.* 2005;44(6):674–677.
36. Hermes D, Schweiger U, Warnecke KK, et al. Incorporation of multiple foreign bodies due to borderline personality disorder. *Mund Kiefer Gesichtschir.* 2005;9(1):53–58.
37. Wraight WM, Belcher HJ, Critchley HD. Deliberate self-harm by insertion of foreign bodies into the forearm. *J Plast Reconstr Aesthet Surg.* 2008;61(6):700–703.
38. Shearer SL. Phenomenology of self-injury among inpatient women with borderline personality disorder. *J Nerv Ment Dis.* 1994;182(9):524–526.
39. Kapandji M. An unusual case of foreign bodies in the urethra. *J Urol Nephrol (Paris).* 1971;77(10):817–821.
40. Gropman AL, Duncan WC, Smith AC. Neurologic and developmental features of the Smith-Magenis syndrome (del 17p11.2). *Pediatr Neurol.* 2006;34(5):337–350.
41. Bloch Y, Lauder A, Ratzoni G. How many pins? a case report of a girl who swallowed more than 50 straight pins in a suicide attempt. *Int J Adolesc Med Health.* 2005;17(3):295–297.
42. Acham A. The interesting case—case no 69. *Laryngorhinootologie.* 2005;84(3):193–195.
43. Nielsen SU, Rasmussen M, Hoegberg LC. Ingestion of six cylindrical and four button batteries. *Clin Toxicol (Phila).* 2010;48(5):469–470.
44. Diggs CA. Suicidal transurethral perforation of bladder. *Am J Forensic Med Pathol.* 1986;7(2):169–171.
45. Sharif S, Roberts G, Phillips J. Transnasal penetrating brain injury with a ball-pen. *Br J Neurosurg.* 2000;14(2):159–160.
46. Walter G. An unusual monosymptomatic hypochondriacal delusion presenting as self-insertion of a foreign body into the urethra. *Br J Psychiatry.* 1991;159(2):283–284.
47. Inoue T, Iemura J, Saga T. Delayed cardiac tamponade caused by self-inserted needles. *Can J Cardiol.* 2003;19(3):306–308.
48. Zafrullah M. Unusual foreign body in the male urinary bladder and urethra. *Br J Clin Pract.* 1969;23(3):123–124.
49. Khan SA, Davey CA, Khan SA, et al. Munchausen's syndrome presenting as rectal foreign body insertion: a case report. *Cases J.* 2008;1(1):243.
50. Huffman JC, Stern TA. The diagnosis and treatment of Munchausen's syndrome. *Gen Hosp Psychiatry.* 2003;25(5):358–363.
51. Rada RT, James W. Urethral insertion of foreign bodies: a report of contagious self-mutilation in a maximum-security hospital. *Arch Gen Psychiatry.* 1982;39(4):423–429.
52. Rahman NU, Elliott SP, McAninch JW. Self-inflicted male urethral foreign body insertion: endoscopic management and complications. *BJU Int.* 2004;94(7):1051–1053.
53. Bantis A, Sountoulides P, Kalaitzis C, et al. Perforation of the urinary bladder caused by transurethral insertion of a pencil for the purpose of masturbation in a 29-year-old female. *Case Rep Med.* 2010;2010.
54. Mukerji G, Rao AR, Hussein A, et al. Self-introduction of foreign body into urinary bladder. *J Endourol.* 2004;18(1):123–125.
55. Kenney RD. Adolescent males who insert genitourinary foreign bodies: is psychiatric referral required? *Urology.* 1988;32(2):127–129.
56. Loeser A, Gerharz EW, Riedmiller H. Chronic perforation of the urinary bladder by self-inserted foreign body. *Int Urogynecol J Pelvic Floor Dysfunct.* 2007;18(6):689–690.
57. Bichler KH, Deppe HU, Mewe F, et al. Foreign body injuries of urethra and bladder in the young: their psychosexual background. *Urol Int.* 1971;26(2):161–170.
58. Ayantunde AA, Oke T. A review of gastrointestinal foreign bodies. *Int J Clin Pract.* 2006;60(6):735–739.
59. Cohen JS, Sackier JM. Management of colorectal foreign bodies. *J R Coll Surg Edinb.* 1996;41(5):312–315.
60. De Tarnowsky G. A unique foreign body in the urinary bladder. *JAMA.* 1915;64:1495.
61. Quin G, McCarthy G. Self insertion of urethral foreign bodies. *J Accid Emerg Med.* 2000;17(3):231.
62. Benjamin F, Guillaume AJ, Chao LP, et al. Vaginal smuggling of illicit drug: a case requiring obstetric forceps for removal of the drug container. *Am J Obstet Gynecol.* 1994;171(5):1385–1387.
63. Stewart A, Heaton ND, Hogbin B. Body packing—a case report and review of the literature. *Postgrad Med J.* 1990;66(778):659–661.
64. Franzblau AH. Itchy urethra. a case report. *Rocky Mt Med J.* 1973;70(11):35.
65. Sharma UK, Rauniyar D, Shah WF. Intravesical foreign body: case report. *Kathmandu Univ Med J (KUMJ).* 2006;4(3):342–344.
66. Packard FR. III: an analysis of two hundred and twenty-one cases of foreign body introduced into the male bladder per urethra, with report of a recent case. *Ann Surg.* 1897;25(5):568–599.
67. Poulet A. *A Treatise on Foreign Bodies in Surgical Practice.* New York, NY: William Wood & Co; 1880.
68. Hoffman HA, Colby FH. Incarceration of the penis. *J Urol.* 1945;54:391–399.
69. Goldman M, Johnson G. "Wired for electricity" or the case of a bizarre foreign body in the bladder. *Urol Cutaneous Rev.* 1946;50:202.
70. Li ZS, Sun ZX, Zou DW, et al. Endoscopic management of foreign bodies in the upper-GI tract: experience with 1088 cases in China. *Gastrointest Endosc.* 2006;64(4):485–492.
71. Chaves DM, Ishioka S, Félix VN, et al. Removal of a foreign body from the upper gastrointestinal tract with a flexible endoscope: a prospective study. *Endoscopy.* 2004;36(10):887–892.
72. Kim JK, Kim SS, Kim JL, et al. Management of foreign bodies in the gastrointestinal tract: an analysis of 104 cases in children. *Endoscopy.* 1999;31(4):302–304.
73. Barros JL, Caballero A Jr, Rueda JC, et al. Foreign body ingestion: management of 167 cases. *World J Surg.* 1991;15(6):783–788.
74. Palta R, Sahota A, Bemarki A, et al. Foreign-body ingestion: characteristics and outcomes in a lower socioeconomic population with predominantly intentional ingestion. *Gastrointest Endosc.* 2009; 69(3, pt 1):426–433.
75. Bisharat M, O'Donnell ME, Gibson N, et al. Foreign body ingestion in prisoners—the Belfast experience. *Ulster Med J.* 2008;77(2):110–114.
76. Smiley O. A glass tumbler in the rectum. *JAMA.* 1919;72:1285.
77. Yaman M, Deitel M, Burul CJ, et al. Foreign bodies in the rectum. *Can J Surg.* 1993;36(2):173–177.
78. Kurer MA, Davey C, Khan S, et al. Colorectal foreign bodies: a systematic review. *Colorectal Dis.* 2010;12(9):851–861.
79. Stricker T, Navratil F, Sennhauser FH. Vaginal foreign bodies. *J Paediatr Child Health.* 2004;40(4):205–207.
80. Jaluvka V, Novak A. Vaginal foreign bodies in women in postmenopause and in senium. *Eur J Obstet Gynecol Reprod Biol.* 1995;61(2):167–169.
81. Roark GD, Subramanyam K, Patterson M. Ingested foreign material in mentally disturbed patients. *South Med J.* 1983;76(9):1125–1127.
82. Campbell EW. Foreign bodies in the urinary tract. In: Campbell ME, ed. *Urology*. 2nd ed. Philadelphia, PA: WB Saunders Co; 1963;775–795.
83. Prasad S, Smith AM, Uson A, et al. Foreign bodies in urinary bladder. *Urology.* 1973;2(3):258–264.
84. Woodside J, Bergreen PW. Coyote rib as an urethral dilator. *Rocky Mt Med J.* 1976;73(5):270–271.
85. Wise TN. Urethral manipulation: an unusual paraphilia. *J Sex Marital Ther.* 1982;8(3):222–227.

86. Granados EA, Riley G, Rios GJ, et al. Self introduction of urethrovaginal foreign bodies. *Eur Urol*. 1991;19(3):259–261.
87. Geyermann PT. Medical curiosities. *JAMA*. 1937;108:1409.
88. Baird JM, Spence HM. Ingested foreign bodies migrating to the kidney from the gastrointestinal tract. *J Urol*. 1968;99(6):675–680.
89. Fister GM. Chewing gum as the nucleus of a vesical calculus in the male. *Urol Cutaneous Rev*. 1934;38:118.
90. Glenn WF. Cocaine solutions. *JAMA*. 1887;9:383.
91. Simon S. Rifle bullet impacted in the anterior urethra. *J Urol*. 1949;61(4):785–789.
92. Carruthers RH. An unusual urethral foreign body. *Can Med Assoc J*. 1959;80(10):829.
93. Wykes WN, Barker JR. Urethral discharge associated with ingested foreign body. *BMJ*. 1978;2(6154):1751.
94. Jameson RM. A case of an impacted foreign body in the urethra. *Br J Urol*. 1965;37(4):475–476.
95. Barnett RM, Wolk BM. Laparoscopic removal of a foreign body from the bladder. *Am J Obstet Gynecol*. 1978;130(3):364–365.
96. White EW, Holm AH. Foreign bodies from urethra and bladder. *Am J Surg*. 1927;52:223.
97. Radford PJ, Thomson DJ. A case of methylmethacrylate bladder stone. *Acta Orthop Scand*. 1989;60(2):218–219.
98. Baumgartner G, Nesser HJ, Jurkovic K. Unusual cause of dysuria: migration of a pacemaker generator into the urinary bladder. *Pacing Clin Electrophysiol*. 1990;13(6):703–704.
99. Falagas ME, Christopoulou M, Rosmarakis ES, et al. Munchausen's syndrome presenting as severe panniculitis. *Int J Clin Pract*. 2004;58(7):720–722.
100. Parker B. A case of self-mutilation by means of pins. *S Afr Med J*. 1964;38:116–117.
101. Birrer RB, Robinson T, Rao S, et al. Self-mutilation: three cases and a review of the literature. *J Emerg Med*. 1993;11(1):27–31.
102. Richmond PW, Williams LA. Glass in the foot: negligence or a criminal act? *BMJ*. 1989;298(6686):1491.
103. Goldman EP, Smith TA. Case of the amazing radiographs. *J Am Podiatr Med Assoc*. 1993;83(4):234–235.
104. Paulino AF, Krolikowski FJ. Insertion of foreign bodies into the abdominal cavity: an unusual form of self-mutilation. *Am J Forensic Med Pathol*. 1995;16(1):48–50.
105. Schwartz DL, So HB, Schneider KM, et al. Chronic insertion of foreign bodies into the mature breast. *J Pediatr Surg*. 1977;12(5):743–744.
106. Dwivedi SK, Gupta LC, Narain VS. Self inserted needle in heart—localization by cross-sectional echocardiography. *Eur Heart J*. 1991;12(2):286–287.
107. Jamilla FP, Casey LC. Self-inflicted intramyocardial injury with a sewing needle: a rare cause of pneumothorax. *Chest*. 1998;113(2):531–534.
108. Akgüner M, Atabey A, Top H. A case of self-inflicted intraorbital injury: wooden foreign body introduced into the ethmoidal sinus. *Ann Plast Surg*. 1998;41(4):422–424.
109. Rubinstein A, Riddell CE, Kafil-Hussain N, et al. Self-inserted intraorbital foreign bodies. *Ophthalm Plast Reconstr Surg*. 2005;21(2):156–157.
110. Bibring GL. Psychiatry and medical practice in a general hospital. *N Engl J Med*. 1956;254(8):366–372.
111. Groves JE. Management of the borderline patient on a medical or surgical ward: the psychiatric consultant's role. *Int J Psychiatry Med*. 1975;6(3):337–348.
112. Greilsheimer H, Groves JE. Male genital self-mutilation. *Arch Gen Psychiatry*. 1979;36(4):441–446.
113. Schrom T, Amm S. Unusual case of oesophageal foreign body as part of a self-harm syndrome. *Laryngorhinootologie*. 2009;88(4):253–256.
114. Frozanpour D. Foreign bodies in the bladder. *Br J Clin Pract*. 1976;30(5):115–118.
115. Dakin WB. *Urological Oddities*. Los Angeles, CA: WB Dakin; 1948.
116. Freud, S. Character and anal eroticism. *The Standard Edition of the Complete Psychological Works of Sigmund Freud, Volume 9: Jensen's "Gradiva" and Other Works*. London, UK: Hogarth Press; 1908.
117. Byard RW, Eitzen DA, James R. Unusual fatal mechanisms in nonasphyxial autoerotic death. *Am J Forensic Med Pathol*. 2000;21(1):65–68.