Experience of a Tertiary-Level Urology Center in the Clinical Urological Events of Rare and Very Rare Incidence. II. Urological Self-Inflicted Harms: 1. Unintentional Patient’s Side-Inflictor Urological Injuries

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Key Words
Genital mutilation • Self-cutting • Self-harms • Self-inflicted injuries • Unintentional self-injuries

Abstract
Introduction: Unintentional self-inflicted injuries mainly refer to those injuries which are inflicted by the patient himself with benign intentions. In urology, they may vary and result in significant morbidities. Patients and Methods: A retrospective search of our patients' data records for the reported cases of patient’s side-inflictor urological injuries during the period July 2006 – June 2016 was made. Each case was studied for age, gender, primary diagnosis, injury inflictor, involved organ, motivating factor, mechanism, diagnosis, management, and final outcome. Results: Of more than 55,000 urological procedures, 26 patients (0.047%) were involved in unintentional patient’s side-inflictor urological injuries. The age range was 8–76 years and included 23 males and 3 females. Fifteen patients (57.7%) had urological disorders before the injury. They could be differentiated into direct organ involvement injuries (53.8%) and catheter involvement injuries (46.2%). External male urogenital organs were involved in 69.3% of cases which were diagnosed on physical examination. The inflictor of the injury was the patient himself, a relative, and another patient in 73.1, 19.2, and 7.7% of cases, respectively. Motivating factors were relief of painful conditions (34.6%), psychiatric disorders (38.5%), and sexual purposes (27%). Final outcomes were short-term harm, long-term harm, and permanent disability in 50, 11.5, and 38.5% of cases, respectively. Conclusion: Unintentional patient’s side-inflictor urological injuries are very rare events and mainly involve the external male urogenital organs under different motivating stressors. They could be differentiated into direct organ and catheter manipulation injuries with variable final outcomes from mild short-term harms to permanent disabilities.
Introduction

Human protection against harms is a public need and ethical principle of human rights adopted by many international and national agencies such as The United Nations and World Health Organization [1, 2]. This protection is considered against harms from both the self and the others confronted by the balances between rights against duties and autonomy against beneficence [3]. This principle aims to keep vulnerable population groups such as the women, children, elderly, intersex, mentally-ill individuals, and social minorities away from corresponding potential sources of harms by discrimination or violation of security [4, 5]. Specifically, keeping these rights viable is necessary for the methods and quality of provided medical care services such as research, disease causalities, and legislated interventions [2, 6]. Self-harms are variable events that vary between intentional injuries which are mostly suicidal and the unintentional or non-suicidal injuries. They may indicate protection of those patients or individuals from the underlying factors of the self-harms and their risks [5, 7].

Unintentional self-injuries may be inflicted for benign intentions such as to treat or to relieve certain conditions such as pain, retention, or priapism. They commonly involve the external genitourinary organs. So, great attention is warranted to prevent their long-term effects on the sexual, reproductive, psychological, and physiological functions [8]. In the literature, the unintentional and non-fatal self-harms have received less attentions than the suicidal ones [9, 10]. This study targeted the unintentional self-inflicted urological injuries including those inflicted by caring relatives or other patients. This rationale may mitigate the concerns that may arise about the title of this study.

Patients and Methods

A retrospective search of the registered data of the patients in Assiut Urology and Nephrology Hospital, Assiut University, Egypt was done to study the unintentional mechanical injuries inflicted by patients themselves, relatives, or another patients. The duration of the study was June 2006 – July 2016.

Accidental injuries including those resulting from accidental slippages or tractions of catheters were excluded from the current study, because these events were considered as accidental injuries rather than self-inflicted ones. Also, biological and microscopic urogenital tissue injuries which resulted from drug abuses including nephrotoxic drugs and poisoning were not included in the current study. They are common events in practical urology and cannot be estimated on a clinical basis and quantitative evaluations.

So, they were excluded from the current study, although they may complicate self-inflicted drug ingestions or exposures.

Each included case was studied for demographic variables, primary diagnosis, form and mechanism of injury, injury inflictor, motivating factor, clinical presentation, diagnostic methods, management, sequels and complications, and final outcomes (death, organ loss, permanent disability, and short- or long-term harms).

A classification of the self-inflicted urological injuries was proposed according to the intentions and motivating factors.

Results

More than 55,000 urological procedures were done during the period of the study. Also, the approximate annual rate of the outpatient clinic attendance was more than 34,000 patients per year. From all the urological procedures, 26 patients (0.047%) were involved in self-inflicted urological injuries. The age range was 8–76 years and included 23 males and 3 females and only 2 children. The education level was illiterate in 9 cases (34.6%), low education in 13 cases (50%), and middle education in 4 cases (15.4%).

Clinical presentations were different, because the events varied in sites and mechanisms. Most of them were clinically detectable in the external injuries. Diagnosis of the injuries was done via physical examination in 18 cases (69.2%), imaging in 2 cases (7.7%), cystoscopy in 2 cases (7.7%), and surgical exploration in 4 cases (15.4%). Primary diagnoses and the patients’ numbers and percentages were distributed according to having urological or non-urological disorders (table 1).

Injuries involved the kidney, bladder, urethra, penis, and bladder with the vagina in 3 (11.5%), 2 (7.7%), 8 (30.8%), 10 (38.5%), and 3 (11.5%) cases, respectively.

| Table 1. Primary diagnoses of the patients who had self-inflicted injuries |
| Group | n (%) |
| Healthy individual (normal) | 9 (34.5%) |
| Non-urological | 2 (7.8%) |
| Schizophrenia | 3 (11.5%) |
| Urological and non-urological | 3 (11.5%) |
| Schizophrenia and benign prostatic hyperplasia | 1 (3.9%) |
| Urological only | 3 (11.5%) |
| Hydronephrosis | 2 (7.8%) |
| Benign prostatic hyperplasia | 1 (3.9%) |
| Urethral stricture | 2 (7.8%) |
| Erectile dysfunctions | 2 (7.8%) |

Patient’s Side-Inflictor Urological Injuries
Mechanisms of injuries were differentiated into direct organ involvement injuries in 14 patients (53.8%) and catheter involvement injuries (forcible removal or insertion) in 12 patients (46.2%). In the former group, injuries resulted from foreign body introduction in 3 cases, forcible manual organ manipulation in 9 cases, and local drug application in 2 cases. In the latter group, injuries complicated forcible removal of urethral catheters in 6 cases, forcible catheter insertion in 1 case, forcible nephrostomy tube traction in 3 cases, and cystocath traction in 2 cases.

The inflictor of injury was the patient himself, a relative, and another patient in 19 (73.1%), 5 (19.2%), and 2 (7.7%) cases, respectively. Motivating factors for injury infliction are presented in a chart (fig. 1). Painful conditions included 5 cases of urinary retention and 4 cases of priapism.

Management of injuries varied according to the event: catheter induced injuries indicated repositioning in 9 cases (34.6%) and replacement by a suprapubic cystocath in 1 case, before scheduling for primary cause correction surgeries. In the 11th case, an obstructed urethral catheter with urinary retention occurred in a 58-year-old man who ligated the indwelling urethral catheter to a fixed stand and ran in the opposite direction. This led to forcible extraction of the urethral catheter while its balloon still inflated and resulted in massive bleeding up to hypotension. This patient did not immediately present to the hospital and, surprisingly he spontaneously voided after this injury with a follow-up for 3 years.

Penile amputation injuries were managed accordingly: 1 case of penile amputation in a child, inflicted by his psychotic uncle, was salvaged by immediate repair, while the other 2 cases indicated remote phalloplasty. Four cases of penile fracture were explored and immediately repaired and followed for 3–6 years. They resulted in erectile dysfunctions and were treated by penile prosthesis in 3 cases. The 4th case was conservatively managed via phosphodiesterase inhibitors.

The final outcomes were short-term harms in 13 cases (50%), long-term harms in 3 cases (11.5%), and permanent disabilities in 10 cases (38.5%). No deaths occurred due to self-inflicted urological injuries.

According to the types of self-injury in the current results and literature, a classification was proposed to represent the spectrum of self-harms and their categories correlated to the motivating factors (fig. 2).

**Discussion**

The term “self-harm” refers to a wide range of behaviors and intentions. However, it is commonly employed to describe suicidal harms with less attentions to the non-suicidal harms [9, 11]. On one hand, self-harms comprise a markedly variable spectrum of events between negative medical decisions and self-inflicted mechanophysical injuries. The latter consists of suicidal and non-suicidal injuries (fig. 2). On the other hand, mechanophysical traumas are classified into self-inflicted, interpersonal violence, and accidental injuries [12]. Self-inflicted mechanophysical injuries represent an area of overlap between the spectrums of self-harms and mechanophysical traumas (fig. 3).

In the literature, the term “self-harm” has been variably employed to represent self-inflicted harms from different perspectives including the psychopathological, sociocultural, and criminal aspects [4, 11, 13]. Further, self-harms could be differentiated according to the presence or absence of unfavorable underlying intentions to die into intentional or unintentional injuries, respectively. So, self-inflicted injuries could be intentional ones when they are inflicted for ending life known as “suicide” or for other favorable or unfavorable defensive intentions such as malingering, accusing others, and sacrifices for certain ideologies. However, unintentional injuries are inflicted for coping with correction under certain motivators which are benign from the inflictor perspectives [7, 13].

The motivations and intentions for self-inflicted harms markedly vary. Accordingly, their classification into intentional and unintentional may not be fully acceptable among researchers and writers of guidelines. This perspective is based on the notion that the self-in-
Fig. 2. A chart representing a classification of self-harms. Note the lightly-shadowed boxes that represent unintentional mechanophysiological self-inflicted injuries. Fedayeen/Mujahideen refers to the sacrifice by life based on wrong ideas. It should not be confined to a certain religion, race or any specified population.

Fig. 3. A diagram showing the overlap between the spectrums of self-harms and mechanophysical traumas.
injuries that could be inflicted by related individuals, in addition to self-inflicted injuries.

The perspectives of the clinicians of different medical specialties about self-harms may be different. A perspective that focuses mainly on the occurrence of overt suicide considers self-harm as a suicidal action and may differentiate pre-suicidal acts as non-suicidal injuries. It may belong to the psychiatrists who mainly consider suicidal intentions in psychopathological degrees [13]. However, other perspectives such as ours as clinical urologists, may consider the intentions to self-harm in a clinical complex form. This means that the intention has 2 components: the intention to die and the intention to commit the event. In addition to the awareness about doing the harm, these factors should be available to differentiate a self-inflicted harm as being intentional or unintentional. So, the intentions to die and to commit the harm seem to be complementary to each other and we should be aware of them. However, still the main component is the intention to die which differentiates the event of suicide from non-suicide [10, 13]. Accordingly, we considered the included events as unintentional, because they were devoid of the intention to die as a motivating factor for self-injury.

Unintentional self-injuries could be inflicted under motivation of different stressors. Vulnerable populations to self-inflicted injuries include individuals who have mental illnesses, religious constraints, drug-induced disorders, and ignorance [15]. It was believed that unintentional self-injuries may have functions in regulation of emotions [16]. However, they can serve this role in different ways and the challenge is to clarify the precise functions for a given individual in a certain context [17].

Classification of self-inflicted harms can be done according to 2 factors: the form or mechanism of the harm and the motivating factor of this harm (fig. 2). Accordingly, a given human may injure himself under the effects of many positive or negative stressors or desires. These stressors can be classified as: self-killing as in suicidal injuries, self-defense as sacrifices, or accusing others by malingering trauma, self-punishment as obeying incorrect beliefs and psychiatric or religious delusions, self-satisfaction as autoerotism for sexual motives and drugs addiction effect, self-relief from an outstanding pain or stress such as acute urinary retention, self-therapy as use of traditional therapeutics with ignorance of the effects or sequel of the used therapy, and coping with traditions such as mutilating circumcisions. The outcomes from relieving these stressors are seen as being functions of non-suicidal or unintentional injuries [18].

Self-killing or suicide is an intentional self-inflicted harm which is commonly accomplished by self-poisoning or self-injury that commonly targets the non-urological organs in which their injuries threaten the life such as shooting, hanging, vascular cuts, and jumping from heights. However, indirect renal injury may result from suicidal trials by other means than mechanophysical injuries such as nephrotoxic ingestions [19]. All the events mentioned in this paragraph are out of the scope of this study.

Self-punishment under the effect of sensation of guilt or shame may be based on incorrect religious beliefs or psychiatric disorders such as self-amputation of the penis or all the external genitalia to counteract psychotic disorders known as Klingsor syndrome [20, 21]. These injuries are extremely rare in the literature and are mainly related to guilt feelings with religious psychotic experiences for sexual offences [15, 22, 23]. This class of self-harm may take the form of self-cutting trauma in the urological practice, which is mainly encountered as self-inflicted genital injuries, mutilations, or amputations [20, 21]. The external anatomical location of the male genitalia makes them relatively exposed and vulnerable to trauma. So, self-inflicted urogenital injuries are commonly directed at the external genitalia making them one of the three body parts which are commonly involved in major self-mutilations, but not life threatening in most occasions [8, 24]. In the current study, external genitalia were amputated due to the effect of psychiatric delusions of guilt or from psychotic relatives. These forms of genital injuries represent the intimate psychourological association of self-inflicted injuries.

Self-satisfaction related injuries include autoerotism via injurious introduction of foreign bodies through the urethra. Various objects and materials may be used to increase sexual performance or for autoerotic intentions [25]. In the current study, pens were used in 2 cases for this purpose with urethral injuries complicated by voiding dysfunctions.

Self-relief related injuries include withdrawal of the cause of pain as occurred in the current study, where some patients tried forceful removal of indwelling urinary catheters. The objective of relieving painful situations may motivate relatives to commit wrong behaviors for benign intentions such as forcible removal of an obstructed urethral catheter to relieve urinary retention. Also, relief of prolonged erection by forcible bending of the penis results in penile fracture. This traditional habit is known in the literature as Taghaandan, which is a common mechanism for penile fracture in the Mediterranean and Middle East regions [8].
Self-therapy related injuries may be inflicted with a paradoxical belief of beneficence or as cultural practices [24]. Pharmacological topical penile medications are used for many purposes including erectile dysfunctions with few side effects [26]. However, dramatic harms could evolve by the misuse of pharmacological [27] or traditional preparations [28]. By mistake, undetermined topical preparations may have erosive effects and induce skin macerations or paradoxically induce priapism. These scenarios were encountered in the cases of the current study.

Psychiatric disorders are the motivating factors in 80–90% of self-harms in adolescents and adults [9]. When the self-inflicted injury occurs during hospitalization, it is considered as a never event according to the report of the National Quality Forum [29]. We included 3 cases of forcible catheter extraction during hospital stay in the current study. The medical personnel on duty were advised of safety rules and protection of the vulnerable patients.

To our knowledge, the current study is the first one that was conceptualized to include all the urological self-injuries of different motivating factors from urological perspectives. Also, it is the first one that tried to classify these events within the frame of self-harm. Although its design as a retrospective study may have less strength, it is still the best possible method to gather these rare and very rare events in such a practical urological perspective.

Conclusion

Unintentional patient’s side-inflictor urological injuries are very rare events which mainly involve the external male urogenital organs under different motivating factors. The inflictor may be the patient himself, a relative or another patient. These injuries can be differentiated into direct organ and catheter manipulation injuries with variable final outcomes up to permanent disabilities.

References

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