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ORIGINAL PAPER

Male external genitalia self-mutilation in Burkina Faso: Nationwide study of 13 cases

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Summary *Introduction: Genital self-mutilation is an infrequent uro-psychiatric emergency in urological practice. Many authors have emphasized its rarity in the literature. In Burkina Faso, the incidence and prevalence are poorly due to under-notification and the absence of large-scale studies. We proposed this multicenter study to determine the epidemiological, diagnostic, therapeutic and evolutionary aspects of male external genitalia (MEG) self-mutilation in Burkina Faso.*
Materials and methods: A retrospective multicenter study was conducted, including all patients treated for male external genitalia self-mutilation in 03 referral university hospital centers in Burkina Faso from January 1, 2018 to December 31, 2024. Penile and testicular injuries were classified according to the American Association for the Surgery of Trauma (AAST) classification.
Results: We collected 13 cases of MEG self-mutilation. The average age was 29.54 years with extremes of 18 and 62 years. All our patients were single and had a low socioeconomic standard of living. All the patients had psychiatric history. Lesion assessment revealed 03 cases of penis strangulation by metal ring, 06 cases of isolated penile section, 03 cases of testicular section + penile section and one case of isolated testicular section. AAST I penile lesions were trimmed with haemostasis and simple skin suture. Urethrostomies and stump regularizations dominated the procedures performed in cases of AAST V penile section. We noted a single penile reimplantation without magnifying glasses in a case of near-complete penile section of the penis AAST IV. Postoperative follow-up was straightforward in 12 cases and complicated by necrosis of the reimplanted segment in 01 case. Sequelae were unsightly and functional in cases of AAST IV and V section.
Conclusions: Self-mutilation lesions in MEG are varied, and their management have benefited from the contribution of microsurgery in developed countries. It remains problematic in developing countries.

KEY WORDS: *Self-mutilation; External genitalia; Psychiatric history; Reimplantation without magnifying glasses; Burkina Faso.*

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INTRODUCTION

Self-mutilation is an intentional injury that a subject inflicts on a part of body with no apparent intention of killing oneself (1). Genital self-mutilation is an infrequent uro-psychiatric emergency in everyday urological practice. Numerous authors have highlighted its rarity literature (2-4). Most published work on genital self-mutilation in Africa are reports of isolated cases or series of two or three cases observed in a single hospital (2-5). In Burkina Faso, the incidence and prevalence are poorly due to under-notification and the absence of large-scale studies. We proposed this multicenter study to determine the epidemiological, diagnostic, therapeutic and evolutionary aspects of self-mutilation of male external genitalia (MEG) in Burkina Faso.

MATERIALS AND METHODS

A retrospective multicenter study was conducted, including all patients treated for MEG self-mutilation in 03 referral university hospital centers in Burkina Faso from January 1, 2018 to December 31, 2024. A complete analysis of patients' medical observations was carried out in order to study the epidemiological, diagnostic therapeutic and evolutionary aspects of MEG self-mutilation in Burkina Faso. Penile and testicular injuries were classified according to the *American Association for the Surgery of Trauma* (AAST) classification (Tables 1, 2).

Table 1.
AAST classification of penile traumatic injuries.

Grade	Description of lesions
I	Cutaneous wound or contusion
II	Wound reaching Buck's fascia without tissue loss
III	Skin avulsion, transfixing wound of the glans or meatus, urethral laceration, or cavernous body wound less than 2 cm
IV	Partial penectomy or tissue loss of cavernous bodies or urethra greater than 2 cm
V	Complete penectomy

Table 2.
AAST classification of testicular traumatic injuries.

AAST Grade	Description of lesions
I	Contusion or hematoma
II	Tunica albuginea wound without rupture
III	Rupture of tunica albuginea with less than 50% parenchymal loss
IV	Rupture of tunica albuginea with more than 50% parenchymal loss
V	Complete destruction or avulsion of the testis

Results

We collected 13 cases over 07 years from January 1, 2018 to December 31, 2024. The mean age of patients was 29.54 years with extremes of 18 and 62 years. In our study, 09 patients (69.23%) were unemployed. The distribution according to occupation is given in Table 3. All our patients were single and had a low socioeconomic standard of living. We noted two mechanisms of self-mutilation: 03 cases of strangulation of the penis and 10 cases of MEG sectioning. Table 4 shows the distribution of patients according to the vulnating agent. There was a predominance of sharp instruments. A metal ring was used in 03 cases. All the patients had a psychiatric history, including three (03) who were also addicted to psychoactive substances. Only 04 were being followed up, 01 of whom had stopped his treatment several days previously.

On general examination, one (01) patient had psychomotor agitation. The haemodynamic state was unstable in one patient with a tachycardia of 113 beats per minute and a blood pressure of 90/54 mm Hg. On urological examination, section of the penis was found in 09 patients including 03 cases of incomplete section and 06 cases of complete section (AAST V). The incomplete sections involved Buck's fascia in the first case (AAST I), Buck's fascia and the superficial dorsal vein in the second case (AAST I) (Figure 1), then Buck's fascia, the albuginea, the two corpora cavernosa and the urethra in the third case. All that remained was the penile skin on the ventral surface the distal stump (AAST IV) (Figure 2). The complete sections involved the entire penis at its base in 03 cases, then the distal segment in then to the distal segment in 03 cases (Figure 3). The amputated stump was used in two cases of complete sectioning of the penis, but without conservation principles. All castrations were classified as AAST V. They were unilateral in 02 cases and bilateral in 02 cases, isolated (Figure 4) or associated with lesions of penile section (total emasculation) (Figure 5, Table 5). The wound was soiled in all cases with blood clots and/or telluric debris. For treatment, labile blood products were used in a case of complete section of the penis who was haemodynamically unstable. He was transfused with two bags of red blood cells. Patients who have strangulation did not receive antibiotic prophylaxis. Cases of section received various antibiotic prophylaxes

Figure 1. *Incomplete penile section AAST I.*

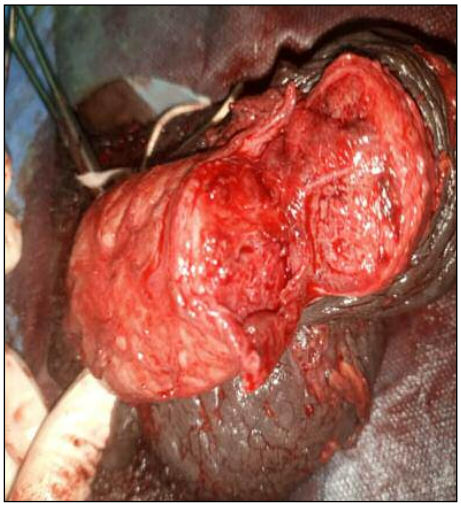

Figure 2. *Incomplete penile section AAST IV.*

Figure 3. *Penile glandulectomy.*

Table 3.
Breakdown of patients by profession.

Profession	Number
Unemployed	9
Farmer	2
Bricklayer	1
Painter	1
Total	13

Table 4.
Vulnerants used by patients.

Vulnerable agent	Number
Knife	4
Metal ring	3
Razor blade	3
Bottle shard	1
Scissors	1
Cutting equipment not specified	1
Total	13

Figure 4. *Bilateral castration.*

Figure 5. *Complete emasculation.*

Table 5.
Summary of injury assessment.

N° patient	Penile lesions	(AAST Grade)	Testicular lesions	(AAST Grade)
1	Strangulation	(I)	–	
2	Strangulation	(I)	–	
3	Strangulation	(I)	–	
4	Incomplete section (Buck's fascia)	(I)	–	
5	Incomplete section (Buck's fascia + superficial dorsal vein)	(I)	–	
6	Incomplete section (albuginea, corpora cavernosa, urethra	(IV)	Right orchiectomy	(V)
7	Complete section of distal 1/3 penis (glans)	(V)	–	
8	Complete section of distal 1/3 of penis	(V)	–	
9	Complete section of distal 1/3 of penis	(V)	Left orchiectomy	(V)
10	Complete section base of the penis	(V)	–	
11	Complete section base of the penis	(V)	–	
12	Complete section base of the penis	(V)	Bilateral orchidectomy	(V)
13	–		Bilateral orchidectomy	(V)

based on Ceftriaxone or Ceftriaxone + Metronidazole. Tetanus sero-vaccination was given in one case of strangulation by a metal ring and 08 cases of MEG section. About the surgical or instrumental procedure performed, cases of strangulation benefited from extrication by the string technique in 01 case and by sectioning the metal ring in 02 cases using cutting pliers. AAST I. Penile lesions were debried with haemostasis and simple skin suture. Penile reimplantation without magnifying glasses was performed in the case of almost complete section AAST IV. A urethrostomy plus regularization was performed in cases of complete transection of the penis from the base while regularisation of the remaining stumps was carried out in cases of glandulectomy or complete distal section. In cases of castration, haemostatic ligature of the spermatic cords was performed with scrotal plasty.
All our patients had a psychiatric opinion with supportive psychotherapy and outpatient appointments for follow-up. Seven (07) patients were prescribed neuroleptics combined with benzodiazepines. The length of hospitalisation varied from 01 to 02 days for cases of strangulation. For section cases, the average was 8.6 days, with extremes of 5 and 32 days. The post-operative course was simple in 12 cases and complicated by necrosis of the reimplanted segment in 01 case at 11 days post-op. This complication necessitated a return to the operating theatre where he underwent a necrosectomy with regularization and the postoperative follow-up was favorable. The sequelae were unsightly and functional in 08 cases (testicular section and penile sections AAST IV and V).

Discussion

We have collected 13 cases in 07 years. This frequency is theoretically higher, given that our study involved referral hospitals where cases of minor injuries are not systematically referred. This is a rare condition in daily urological practice. *Mzyiene et al.* (5) also reported 08 cases in 10 years and *Mawuko-Gadosseh et al.* (1) 14 cases in 19 years. The average was 29.54 years. This is a relatively young population corroborating the data in the literature. *Mawuko-Gadosseh et al.* (1) found an average age of found an average age of 31.5 years. All the patients had a low socio-economic standard of living. Indeed, 09 patients (69.23%) were unemployed. Low socio-economic status

has been described as a risk factor in the review by *Hawton et al.* (7).
In terms of antecedents and comorbidities, our data are in line with the review of the literature by *Veeder et al.* (8) finding that schizophrenia spectrum disorders were the predominant causes (49%) followed by substance abuse (18.5%). Lack of treatment or discontinuation also played a crucial role in the onset of self-harming acts, calling for greater vigilance in the care of patients suffering from mental disorders.
In the case of lesion assessment, penis strangulations were less represented compared to section cases. It is the same in the literature (1, 6). It might be thought that the absence of sharp material at the time of the act explains the use of a metal ring at hand. the preponderance of penile section lesions was also found by *Mawuko-Gadosseh et al.* (1), who also highlights the rarity of cases of total emasculation, as is the case in our study. For this author, this self-mutilation would have a suicidal significance, a suicide of the male gender, and this gesture should constitute a warning signal for protection of these patients from themselves. Concerning associated lesions, we noted one case of mutilation to the anterior aspect of the right forearm. This means that we must never lose sight of the risk of autolysis, even during hospitalisation, as reported by *Mawuko-Gadosseh et al.* (1) which recorded a case of death on the seventh day of hospitalisation due to autolysis.
Concerning the therapeutic modalities, our patients received various antibiotic prophylaxis based on ceftriaxone or ceftriaxone + metronidazole. For *Mzyiene et al.* (6), amoxicillin-based antibiotic prophylaxis was almost systematic. This diversity of antibiotic use highlights the lack of consensus on antibiotic prophylaxis in cases of self-inflicted EMB and should be the subject of recommendations based on the bacterial ecology in each country. Tetanus sero-vaccination was carried out in almost all our cases who had a skin breach. This is justified by the fact that the vulnating agent used is never sterile and would provide a significant load of telluric germs.
Urethrostomies and stump regularizations dominated the procedures performed in cases of AAST V penile section. This is due to the fact that in our patients, the amputated stumps were returned in only 02 cases. In the 1st case, the surgeon justified the absence of re-implantation by the inadequacy of the technical platform for a for microsurgery, while in the second case, the absence of reimplantation was the poor condition of the stump brought in by the patient, as the principles of conservation of the amputated stump had not been respected.
We noted only one penile reimplantation without magnifying lenses. In developing countries, re-implantations without magnifying glasses are the exception, given the absence of microsurgical equipment (1, 4, 5), whereas in developed countries therapeutic care has benefited from advances in microsurgery, where patients are preferentially transferred to centers with expertise in microvascular techniques (9, 10). All our patients have had a psychiatric opinion with supportive psychotherapy and outpatient appointments for follow-up. Treatment must be multidisciplinary and requires concomitant psychiatric evaluation and management to consolidate the results of surgery. This is a psychiatric emergency because of the risk of recurrence, suicide or significant psychological trauma.
In terms of length of hospital stay, *Mzyiene et al.* (6) found an average hospital stay of 03 days, with extremes of 02 and 10 days. The long hospital stays in our context are justified by the fact that psychiatric care sometimes requires the patient to be seen for several days at a time. The staff, aware of the multidisciplinary nature of the treatment, did not wish to carry out an exeat until after a full psychiatric examination and treatment. What's more, some patients, because of their psychiatric condition, had no relatives or friends around to facilitate their care, which contributed to their prolonged hospital stays.
The post-operative course was simple in 12 cases and complicated by necrosis of the reimplanted segment in 01 case. The evolution was similar in the series by *Mzyiene et al.* (6) who recorded 02 cases of necrosis of the reimplanted segment. The sequelae were unsightly and functional in 08 cases, highlighting the need to create centers of expertise in microvascular reimplantation and penile reconstruction techniques (phalloplasty).

Conclusions

Self-mutilation lesions in MEG are varied and their management has benefited from the contribution of microsurgery in developed countries. It remains problematic in developing countries due to the lack of microsurgical equipment and the poor condition or absence of the amputated stump. Treatment must be multidisciplinary, involving urologists, vascular surgeons, plastic surgeons and psychiatrists. Psychiatric treatment is necessary in all cases in order to consolidate the results of surgery.

Declarations

Ethical approval and consent for participate: *The study was conducted in compliance with the Declaration of Helsinki's principles on human rights and ethical standards in research and has been approved by CERS 2024-12-390.*

Consent for publication: *Written informed consent was obtained from the patients' parents.*

Availability of data and material: *All data generated or analyzed during this study are included in this published article.*

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