



## Case Report

# A case of penile self-mutilation during a suicidal attempt successfully treated using a multidisciplinary approach

Akihiko Nagoshi,<sup>1</sup> Toshiki Kijima,<sup>1</sup>  Issei Suzuki,<sup>1</sup> Kazumasa Sakamoto,<sup>1</sup> Fuyo Nozaki,<sup>2</sup> Daisuke Fujisawa,<sup>2</sup> Norio Sugawara,<sup>3</sup> Kazutaka Shimoda,<sup>3</sup> Hiroataka Asato<sup>2</sup> and Takao Kamai<sup>1</sup> 

Departments of <sup>1</sup>Urology and <sup>2</sup>Plastic and Reconstructive Surgery, and <sup>3</sup>Psychiatry, Dokkyo Medical University, Shimotsuga, Tochigi, Japan

**Correspondence:** Toshiki Kijima MD., Ph.D., Department of Urology, Dokkyo Medical University, 880 Kitakobayashi, Mibu, Shimotsuga, Tochigi, 321-0293, Japan. Email: tkijima@dokkyomed.ac.jp

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**Introduction:** Penile self-mutilation is predominantly associated with psychiatric disorders and rarely occurs during suicide attempts by men with depressive mood disorders. Herein, we have reported a case of penile self-mutilation by a patient with depression.

**Case presentation:** A 63-year-old man with a 20-year treatment history of depression presented to our hospital an hour after cutting his penile shaft during a suicide attempt. Hemostasis was achieved by urologists, and his psychiatric condition was evaluated by psychiatrists. The patient and his family hoped for penile replantation. His mood disorders were controllable, and microscopic replantation was performed by plastic surgeons after multidisciplinary discussion. The patient recovered, urinated without any signs of urinary stricture, showed no progression of depression, and did not repeat the mutilation.

**Conclusion:** Penile self-mutilation during suicide attempts is a rare urological emergency that requires multidisciplinary management involving urologists, psychiatrists, and plastic surgeons.

**Key words:** depression, microscopic reconstruction, multidisciplinary approach, penile self-mutilation, psychiatric disorders.

## Keynote message

Penile self-mutilation is a rare urological emergency. Most reported cases are associated with psychiatric disorders such as schizophrenia; however, penile self-mutilation can occur in men with depression during suicide attempts. Careful evaluation and discussion by multidisciplinary teams involving urologists, psychiatrists, and plastic surgeons are important for the management of this rare emergency.

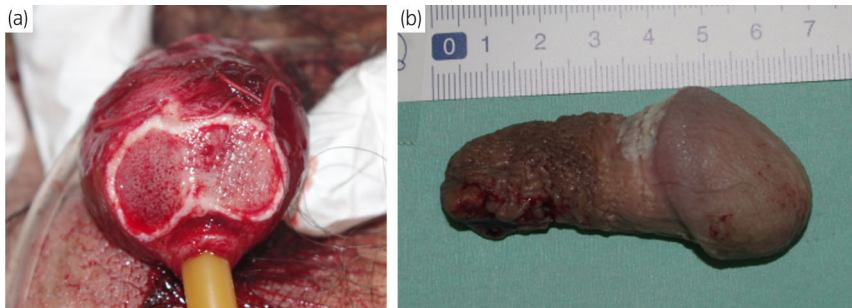
## Introduction

Penile mutilation is a rare urological emergency that may cause major functional disability and loss of quality of life. The current standard management for penile mutilation is replantation of the penis with microscopic anastomosis of the dorsal artery, veins, and nerve, which may provide adequate recovery of urinary function and erection.<sup>1</sup> However, a review of 80 cases of penile replantation reported that the microscopic surgical technique was used in 30 cases and successful anastomosis of the dorsal veins, artery, and nerve was accomplished in only 27 cases<sup>2</sup> therefore, a better understanding of the management of this rare emergency is required.

Most reported cases of penile mutilation are self-inflicted and induced by underlying psychiatric disorders. Improvement of the underlying psychiatric condition is paramount for minimizing the chances of recurrence.<sup>3</sup> Herein, we report a case of penile self-mutilation during a suicide attempt induced by the exacerbation of preexisting depression and successfully treated with multidisciplinary management by urologists, psychiatrists, and plastic surgeons.

## Case presentation

A 63-year-old man with a 20-year treatment history of depression was admitted to a psychiatric hospital due to the exacerbation of depression. He had psychogenic erectile dysfunction.



**Fig. 1** (a) Stump of the penis sharply cut at 2 cm from its base. A urethral catheter was inserted through the urethral stump. (b) Amputated glans

Despite treatment, his symptoms progressed, leading to suicidal thoughts. During hospitalization, he cut his penile shaft with scissors and was referred to our hospital an hour later.

Initial urological examination showed that the penis was sharply cut 2 cm from the base. There was active bleeding in the dorsal artery and veins, and they were ligated. Foley's catheter was inserted through the urethral stump, and the penis was ligated with a soft catheter at the base to achieve temporal hemostasis (Fig. 1a). The amputated glans appeared to be viable. Because the crush of the cut surface was slight and there was no pullout or crush injury in the blood vessel inside the penis, we could expect a good prognosis of replantation (Fig. 1b). The amputated penis was gently washed, wrapped in a gauze soaked in saline, placed in a plastic bag, and stored on ice.

Psychiatric evaluation revealed a depressed affect and hopelessness, but his consciousness was well-retained, and his suicidal thoughts diminished. He did not have any psychotic symptoms. The patient and his family hoped for the surgical reconstruction of the penis. With a diagnosis of depression without psychosis, psychiatrists judged that the risk of the recurrence of self-mutilation could be controlled by adequate treatment. After a discussion with the multidisciplinary team, we decided to perform microscopic replantation of the penis.

Microscopic replantation was performed by plastic surgeons at 5 hours 15 minutes after the self-mutilation. One dorsal artery and multiple dorsal veins were confirmed on microscopic evaluation. After the urethra was anastomosed with 4-0 absorbable suture, the corpus cavernosum and corpus spongiosum were anastomosed with 4-0 absorbable sutures. With microscopic surgery, one dorsal artery and two dorsal veins were anastomosed with a 10-0 nylon suture, and recovery of the bloodstream was confirmed. Arterial blood supply was resumed at 7 h 8 min from injury. Epineural suture with a 10-0 nylon for anastomosis of the nerve was

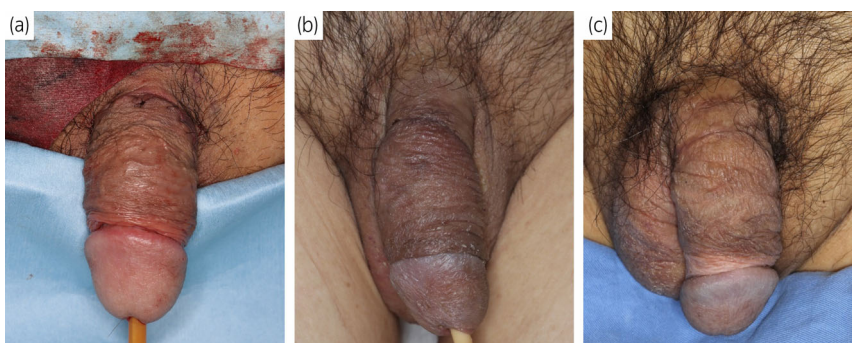
indicated but not performed because the stump of the nerves could not be identified. The surgery was completed with skin closure using a 5-0 nylon suture (Fig. 2a). The operation time was 3 hours and 10 minutes, and the amount of bleeding was 75 ml.

After the surgery, psychiatric medication therapy (mirtazapine 45 mg/day) was continued with medical body restraint. The surgical wound recovered well, and neither skin necrosis nor infection occurred. Three months after the surgery, the surgical wound adhered well without atrophy of the glans (Fig. 2b). After removal of the urethral catheter, the patient could urinate without any signs of urinary stricture. The replanted penis remained viable during follow-up at 6 months (Fig. 2c), although his erection was not preserved.

## Discussion

This case of penile self-mutilation was successfully treated with microscopic reconstructive surgery. The patient mutilated his penis during a suicide attempt induced by the deterioration of depression, and psychiatric management was paramount. The patient recovered well cosmetically and functionally, and his psychiatric condition was well-managed without the recurrence of suicidal thoughts or the repetition of self-injury. Our case elucidates the importance of multidisciplinary management involving urologists, psychiatrists, and plastic surgeons for this rare urological emergency.

Penile replantation was first described in the medical literature in 1929 by Ehrlich et al., who replanted the penis without anatomizing the blood vessels or nerves.<sup>4</sup> Since 1960, the outcomes of penile replantation have improved with the introduction of microsurgical methods. The current standard surgery for penile mutilation involves replantation with approximation of the urethra and corporal bodies and microsurgical anastomosis of at least one dorsal artery, veins, and nerves.



**Fig. 2** Appearance of the replanted penis just after surgery (a) and after 3 months (b) and 6 months (c)

Ischemia time is important for successful tissue reanastomosis. In this case, the blood flow was resumed after 7 hours since injury. Reports suggest that tissues with few muscles such as the penis can survive 24 hours of ischemia,<sup>5,6</sup> rather than 6 hours, which is the gold standard tolerable ischemic time for muscular tissue. Therefore, if the same event occurs at night, the multidisciplinary discussion can be postponed until the next morning.

Penile self-mutilation is frequently observed in men with psychiatric illnesses. A review article by Veeder et al.<sup>7</sup> reported that common psychiatric disorders associated with penile self-mutilation included schizophrenia spectrum (49.0%), substance use (18.5%), and personality (15.9%) and gender dysphoric (15.3%) disorders. Depression and bipolar disorder are rare predisposing factors for penile self-mutilation, with only one reported case of depression<sup>8</sup> and two cases of bipolar disorder.<sup>9,10</sup> This is the second case in the literature with respect to penile self-mutilation caused by depression. Patients with personality or gender identity disorders are at a high risk of remutilation or further self-injury. In contrast, psychiatric disorders such as schizophrenia and depression are fortunately controllable and may be indicated for reanastomosis, suggesting the importance of psychiatric management.<sup>3</sup>

Penile self-mutilation is designated as “phallicide” when executed during suicide attempts by non-psychotic men<sup>8,10</sup> and “Klingsor syndrome” when carried out under the influence of religious delusions without any intent to commit suicide.<sup>11</sup> Our case of penile self-mutilation seems to be phallicide, given the preexisting depression, the suicidal intent, absence of religious delusion, and gender identity disorder.

During the early postoperative course, there is a risk of repeated self-mutilation of the replanted penis. Therefore, intensive psychiatric management is paramount. We treated our patient with medical body restraint and psychiatric medications. For uncontrollable psychiatric conditions, Harris et al. recommended the use of a subcutaneous tunnel created in the suprapubic area to protect the replanted penis from re-injury.<sup>12</sup>

We report the successful management of a case of “phallicide” involving a man with depression. Multidisciplinary approaches are important for good surgical and psychiatric outcomes.

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None declared.

## Author Contributions

Akihiko Nagoshi: Conceptualization; Data curation; Writing – original draft. Toshiki Kijima: Conceptualization; Data curation; Writing – original draft. Issei Suzuki: Writing – review & editing. Kazumasa Sakamoto: Writing – review & editing. Fuyo Nozaki: Data curation; Writing – review &

editing. Daisuke Fujisawa: Data curation; Writing – review & editing. Norio Sugawara: Data curation; Writing – review & editing. Kazutaka Shimoda: Writing – review & editing. Hirota Asato: Writing – review & editing. Takao Kamai: Conceptualization; Supervision.

## Conflict of interest

The authors declare no conflicts of interest.

## Approval of the research protocol by an institutional reviewer board

Not applicable.

## Informed consent

Written informed consent was obtained from the patients for publication of this case report and accompanying images.

## Registry and the registration no. of the study/trial

Not applicable.

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