Case Report

Self-penile glans amputation: a report of two cases

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Case: Self-penile amputation, especially at the glans, has rarely been reported. Most reported cases of self-amputation were performed at the proximal or peripubic area, and there only one case of self-amputation at the glans has been reported in Japan. We report two cases of self-penile amputation at the glans. Case 1: A 31-year-old man with no psychiatric disease completely amputated his penis at the glans. He underwent a stump plasty under spinal anesthesia. Case 2: A 46-year-old man with schizophrenia amputated his penis at the glans. Surgery and the post-surgical course were almost the same as described in Case 1.

Outcome: Both patients experienced few functional problems except for slight urinary stream disorders.

Conclusion: A stump plasty is a good procedure to treat self-penile amputation at the glans. It is simple, quick, does not require special technical skills, and is not associated with serious complications.

Key words: Amputation, glans penis, penile amputation, replantation, self-mutilation

BACKGROUND

SELF-PENILE AMPUTATION is a rare self-mutilation behavior. Most of the reported self-amputations have been carried out at the proximal or peripubic area, and only one case of self-amputation at the glans has been reported in Japan. We recently managed two cases of self-penile amputation at the glans.

CASES

Case 1

A 31-YEAR-OLD MAN WITH no psychiatric disease completely amputated his penis at the glans using a hammer and a chisel, after his wife swore at him. He was transferred to our department within 30 min of the amputation, and his vital signs were stable upon presentation. His penis was sharply amputated at the glans without contamination (Fig. 1A, B). We inserted a 16-French Foley catheter from the external urethral stump and performed a stump plasty under spinal anesthesia. The operation was finished within 4 h after the amputation (Fig. 1C). We left the Foley catheter in place for 3 days. The patient had no surgical complications and was discharged on the 4th day. Psychiatrists monitored his mental condition and did not report any serious problems. He retained his penile functions, including erection, urination, and the ability to perform sexual intercourse with only a slight urinary stream disturbance on the 180th day. He reported that he had decreased his frequency of sexual intercourse because of an inferiority complex about having a shorter penis.

Case 2

A 46-year-old man amputated his glans penis using a knife, in order to commit suicide. He had schizophrenia and had been medicated for 10 years. He had discontinued the medication for the last 6 months before presentation. His schizophrenic symptoms gradually got worse before the amputation. On arrival to our hospital, his vital signs were stable, and the amputated part of the penis was similar to that described in Case 1 (Fig. 2A, B). He also underwent a stump plasty in the same way, as described in Case 1, within 5 h of the amputation (Fig. 2C). We left the Foley catheter in place for 3 days. He had no post-surgical complications, and we transferred him to a psychiatric hospital on the 2nd day, because he was...
suspected to attempt suicide again. There were no complications associated with his penile functions. He had a slight urinary stream disturbance that did not concern him on the 180th day.

**DISCUSSION**

There are three main possible sites of penile amputation: the peripubic area, the proximal part, and...
the glans. Considering all the cases reported in Japan, amputation was carried out at the proximal part in majority of the cases; the peripubic area in 7.4%, the proximal part in 88.9%, and the glans in 3.7%. Complete penile glans amputation has been reported in infants as a complication of circumcision. However, in adults, only one case of self-amputation at the glans has been reported in Japan; the report only included an abstract and did not provide the detailed procedure. It described a man with schizophrenia who committed suicide by cutting his glans using a Japanese sword.

Stump plasty is a simple and quick technique that does not require special technical skills. There are only a few reported complications, except for slight disturbance of the urine stream, as seen in our cases. Stump plasty for amputation at the proximal part usually results in poor ability to perform sexual intercourse, but this is not true when the amputation is carried out at the glans. This is because the glans mainly consists of corpus spongiosum, and the remaining penis retains enough length. Anatomically, the glans is the peripheral, bulging part of corpus spongiosum, which is penetrated by the paired corpus cavernosum. With an erection, the penis gets large due to expansion of both the corpus spongiosum and corpus cavernosum, and gets rigid concurrently with the corpus cavernosum. In sexual intercourse, it is essential to have both, adequate penile rigidity for insertion and penile length to cause enough pleasure for ejaculation. The remaining penis retains enough rigidity and length in the case of glans amputation; thus, stump plasty does not lead to a deterioration of function.

Replantation without venous anastomosis (i.e. non-microscopic surgery) would be effective to improve function, although no successful cases in adults have been reported. The procedure is as follows: stent the urethra with a 14- or 16-French Foley catheter from the amputated external urethral meatus through the proximal urethra to approximate the separated parts of the urethral mucosal surfaces, then anastomose the mucosa of the glans and the proximal penile mucosa with absorbable sutures. The rate of total necrosis is 5%, which is an adequate ratio. The procedure is inferior to the current standard therapy, which involves replantation with venous anastomosis using a microscope (i.e. microscopic surgery), based on the rate of other complications such as erectile dysfunction, urethral stenosis, loss of sensation, and skin necrosis. Carroll compared the complication rates between microscopic and non-microscopic surgery: the rate of erectile dysfunction was 25.0% versus 9.5%, skin necrosis was 40.0% versus 78.8%, urethral stenosis was 0% versus 27.3%, and the loss of sensation was 0% versus 87.9%, respectively.

However, the reports included almost no cases of amputation at the glans. Amputation at the glans has some anatomical advantages compared with that performed at the proximal part. First, skin necrosis does not matter at the glans. It is almost equal to circumcision in which skin is removed around the amputated glans and the glans is anastomosed to the remaining penile mucosa. Second, critical length and rigidity is retained as previously mentioned. As described, there is little influence on sexual function.

Venous outflow in non-microscopic surgery is inferior to that in microscopic surgery. It is one of the most important factors of a successful replantation. Some authors have reported that hyperbaric oxygen therapy and leech therapy were effective in reducing edema caused by insufficient venous outflow. Considering that edema is usually seen at least 24–48 h after the surgical procedure, there would be enough time to consult with an expert. In the worst case scenario of necrosis of the glans, we could choose to perform stump plasty.

There were additional reasons that non-microscopic surgery was preferable in our two cases: each had almost no crushed tissue in cross-sections, and the time from amputation to the conclusion of surgery was less than 6 h. There is a decreased risk of post-surgical complications when replantation is made within 6 h of the amputation.

**CONCLUSION**

**STUMP PLASTY** is an effective and quick surgical technique to treat penile amputation at the glans, and does not require special technical skills. Non-microsurgery would likely lead to better sexual function, although no successful cases have been reported.

**CONFLICT OF INTEREST**

**NONE.**

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