Two-Staged Scrotal Tunnel Flap Repair: Treatment of Self-administered Penile Injection

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ABSTRACT

Objective: The numbers of patients, suffered from complications of self-administered penile injection, increase every year. We present 2-staged scrotal tunnel flap repair to solve their problems.

Methods: From August 2002-May 2004, we performed 8 cases by this technique. All the patients used olive oil injections except one who misused formalin injection. The case with previous bead-embedded penile skin was included. The first stage operation, the excised skin lesion penis was buried to subscrotal tunnel. Three months later, the second stage operations, flap detachment, were managed in 3 styles: 4 cases by linear incision, 2 cases by W-shapes incision and the last 2 cases by Z-plasty incision orderly.

Results: All of the cases, the flaps were healthy and the wounds had neither dehiscence nor infection. The patients had normal sensation and painless erection.

Conclusion: We have found that the 2-staged scrotal tunnel flap repair especially Z-plasty style is a simple operation that regains satisfied function and cosmetic outcome to the complicated self-administered penile injection patient.

Keywords: Penile injection; scrotal tunnel flap; self-administered

Siriraj Med J 2007; 59: 119-121
E-journal: http://www.sirirajmedj.com

Sporadic reports are seen in the literature on the injection of oil into the penis for cosmetic or psychosexual reasons.[1-5] Paraffin compounds, so injected, produce sclerosing lipogranuloma with resultant inflammation and swelling of the penis. The injection of olive oil is also used in Thailand. The patients were encouraged to have the injection by friends for the purpose of increasing coital excitation and orgasm of the mate.

The layman technique of the procedure is as follows: a 5-10 ml of oil is injected into the skin of the penis shaft. Manual massage is done to shape the penis. Multiple injections are needed up to the desired size. The interval between the injection of the foreign fat into the penis and the development of symptoms varies from a few months to years. The patients came to our service because of skin ulcers with painful erection or inability to intercourse.

The best treatment of penile paraffinoma is complete excision and appropriate penoplasty.[6] The scrotal skin, which has high elasticity, seems to be a good material for penile coverage. In one stage repair, sometimes complete removal of the foreign material may not be possible and may leave permanent foreign-body granuloma on the corpus cavernosum and/or corpus spongiosum. We use two-staged scrotal tunnel flap repair to solve their problems.

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MATERIALS AND METHODS

From August 2002 to May 2004, (Table 1) 8 men with self-administered penile injection were reported. All of them used the olive oil, except the 6th case who used

TABLE 1. Descriptive data on age of patients.

Patient	Age (year)
1	18
2*	42
3	40
4	45
5	18
6*	17
7	18
8	17

Fig 1. (A) The 6th case misused formalin injection. (B) The second case embedded 2 beads before and olive oil injection later is shown. (C) The 2 beads from the excised penile skin are demonstrated.

formalin. He misunderstood in buying formalin for paraffin. A few days, after injection 5 ml of formalin, he came to our service with necrosis of his penile skin (Fig 1A).

The second case, the penis had been embedded with 2 beads a few years before the olive oil injection (Fig 1B). All five of them were teenagers (17-18 years).

Surgical Technique

The indurated penile skin and subcutaneous tissue were freed to Buck's fascia and excised. One centimeter of normal penile skin remained from the glans penis. A vertical incision was made at the inferior pole of the scrotum and a subcutanous scrotal tunnel was developed from this incision to the base of the penis. A 16 F Foley catheter was placed into the urethra and the penis was pulled through the scrotal tunnel.

The subcoronal penile skin was approximated to the edges of the distal scrotal tunnel with chromic catgut 4-zero. Penrose drains were positioned. The incision at the base of the penis was closed with interrupted 4-zero chromic catgut.

The penrose drains were left for a few days. The catheter was taken off after a week. The patients were discharged and followed up two weeks later. Then 3 months following the initial procedure, detachments of the flaps were performed in 3 styles. The first 4 cases were linear incision. The 5th, 6th cases were treated by W-shaped flaps. The rest were divided by Z-plasty. (Fig 2)

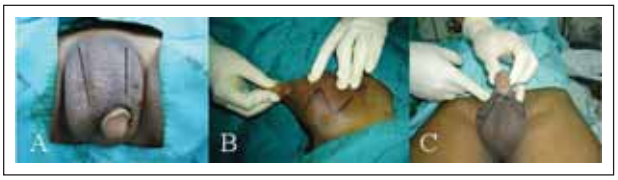

Fig 2. (A) Linear flap outlined on scrotal skin. (B) W-shaped flaps outlined on scrotal skin. (C) Z-plasty flap outlined on scrotal skin.

After the incision, the penis was freed from its scrotal bed. The penile skins were approximated on the ventral surface with interrupted 4-zero chromic catgut and the scrotal incision which was closed is shown.

A 16 F foley cathetor was left for one day. Pressure dressing was used to prevent oozing. The patients were discharged a week after the operation and followed up for one month in the out patient clinic.

RESULTS

The specimens of excised penile skins were sent for histological section. The section showed numerous fat globules and a microscopic diagnosis of lipogranuloma of the penis was made. Microscopically, squamous epithelium is found to be atrophic and acanthotic. The underlying connective tissue has "Swiss cheese" appearance with numerous ovoid cavities present. Focal and diffuse infiltration by plasma cells, mononuclear cell and histiocytes is present. Foreign body giant cells and cholesterol clefts are also demonstrated.

The flap in all cases were healthy, the wounds had neither dehiscence nor infection. One month after the 2nd operation, pin-pick sensations were intact. The patients were enable to have satisfied sensation and painless erection.

DISCUSSION

Some men created their own technique to increase their penile size. Paraffin compound and embedding of beads[7] into the penis were used. In Thailand, the use of hairdressing olive oil has become common.

In 1969 Joseph A Zalar et al.[8] reported a case of 42 years old man. He gave himself subcutanous penile injections of testosterone propionate in a peanut oil suspension to increase his potency. Chronic infection was manifested by a swollen, pruritic penis with multiple recurrent abscesses and inguinal adenopathy.

He underwent 2-staged scrotal tunnel repair. Three weeks following the initial procedure, W-shaped flaps was performed. A 3 by 4 cm Area on the ventral surface of the penis sloughed. A thick split thickness skin graft obtained from the left thigh was applied to the penis to cover this defect. The site of the split thickness skin graft was tight but the patient was able to have normal erection and intercourse.

In our experience, the second operation performed three months after the initial operation provided good results. The scrotal skin was expanded and the detachment of flap was easily performed. There was no necrosis of the flap in all the cases. The linear incision style, there was excess skin at the proximal part of penis and the penoscrotal junction was curved. (Fig 3A)

Fig 3. (A) The linear incision style, the penis is cone shape. (B) The outcome of W-shaped incision style is shown. (C) Anterior view shows nearly normal appearance.

The W-shaped incision style, the interdigitated flaps, at the shaft of the penis was found unnecessarily. But the penoscrotal junction was nearly rectangular angle. (Fig 3B)

The Z-plasty style, the last procedure solves a pitfall of the two former styles. The outcome yields a good cosmetic result (Fig 3C).

Finally, we conclude that the two-staged scrotal tunnel flap repair especially Z-plasty style is the simple suitable operation to regain the normal sensation and good cosmetic result to the complicated self-administered penile injection patient.

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บทคัดย่อ

การผ่าตัด 2 ขั้นตอน แก้ไขความผิดปกติขององคชาต เนื่องจากการฉีดสารแปลกปลอมโดยใช้หนังหุ้มอัณฑะ

ชูสิทธิ์ พานิชวิทิตกุล พ.บ.

กลุ่มงานศัลยกรรม, โรงพยาบาลศูนย์สุรินทร์, อ.เมือง, สุรินทร์ 32000, ประเทศไทย.

วัตถุประสงค์: เสนอวิธีการผ่าตัด 2 ขั้นตอนเพื่อแก้ไขความผิดปกติขององคชาตเนื่องจากการฉีดสารแปลกปลอมโดยใช้หนังหุ้มอัณฑะทดแทน

วิธีการ: ผู้ป่วย 8 ราย ในโรงพยาบาลศูนย์สุรินทร์ ระหว่างเดือนสิงหาคม 2545 - เดือนพฤษภาคม 2547 ซึ่งมีอาการแทรกซ้อนจากการฉีดสารแปลกปลอมเข้าใต้ผิวองคชาต ได้รับการผ่าตัดแก้ไข โดยขั้นตอนแรก ตัดหนังที่เสียออกและฝังแกนองคชาตในถุงอัณฑะ หลังจากนั้น 3 เดือน ทำการผ่าตัด ขั้นตอนที่ 2 เพื่อแยกองคชาตออกจากถุงอัณฑะ โดยแบ่งเป็น 3 วิธี วิธีแรกผ่าตัดเป็นเส้นตรง 4 ราย วิธีที่ 2 ผ่าตัดเป็นรูปตัว W 2 ราย และวิธีสุดท้าย ผ่าตัดเป็นรูปตัว Z 2 ราย

ผลการศึกษา: หลังการผ่าตัดผู้ป่วยทั้งหมดแผลผ่าตัดเรียบร้อย อวัยวะเพศไม่มีอาการชา หรือ เจ็บปวดเวลาแข็งตัว

สรุป: ผู้รายงานได้เสนอวิธีการผ่าตัด 2 ขั้นตอน แก้ไขความผิดปกติขององคชาตจากการฉีดสารแปลกปลอม โดยวิธีใช้ผิวหนังถุงอัณฑะทดแทนผิวหนังเดิม ซึ่งเป็นวิธีที่ง่ายและไม่มีอาการแทรกซ้อนโดยเฉพาะวิธีการผ่าตัดแยกองคชาต ในขั้นตอนที่ 2 รูปตัว Z หลังผ่าตัด องคชาตมีรูปร่างใกล้เคียงปกติ