REPAIR OF PERINEAL RADIATION ULCER WITH GRACILIS MYOCUTANEOUS ISLAND FLAPS

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ABSTRACT

Surgical procedures performed on tissues which have been radiated present great challenges because of problems such as poor wound healing, infection, exposure of important structures and patient's general exhaustion. The general principles of surgical therapy are to remove damaged tissue to the level of good minute blood supply, and to provide suitable coverage.

The myocutaneous flap supported by a single muscle and neurovascular pedicle is an axial pattern flap and thought to be one of the best coverages of the defect.

We present a case in which gracilis myocutaneous flaps were used in the repair of a perineal radiation ulcer.

CASE REPORT

A 63-year-old, thin Chinese female had been radiated 4000 rad each, intra and extra vaginally during 22 days in her stay of the United States, because she had cancer of the pubis of the uterus.

The perineal ulcer developed 3 months after the irradiation. The complexly-irradiation. The complexly-infected ulcer gave her severe disabilities such as severe boring pain, a disturbance of gait and a loss of appetite.

In Japan, she was observed for 6 months under conservative treatment, from the time the ulcer developed. However, the ulcer did not tend to heal. (Fig. 1)

Prior to the operation, careful examinations including biopsy on the rectum, the colon, and the genitourinary system showed no significant invasion of the carcinoma.
OPERATION

She was placed in the lithotomy position, exposing the parts of both thighs. Following the colostomy, the wound was debrided sufficiently. The skin portion of the flap was outlined below a line drawn from the pubic tubercle to the medial femoral condyle. (Fig. 2)

In the lithotomy position, the adductor muscles of the thigh easily slip posteriorly about the femur, so we paid attention to stay posterior to this line.

The dissection was begun proximally at the posterior margin of the adductor longus tendon. Incising its fascia to expose the adductor magnus muscle, the neurovascular bundle to the gracilis muscle was found between the adductor longus and the adductor magnus muscle.

The gracilis muscle was confirmed by palpation and it was divided distally.

Then the gracilis myocutaneous flap was elevated (Fig. 3) and brought to the defect through a subutaneous tunnel beneath the intact skin. (Fig. 4)

The donor sites were closed and the flaps were trimmed to the size of the defect.

Suction drains were used at the donor and the recipient sites.

DISCUSSION

Complete excision of the ulcer will give immediate relief from the constant boring type of pain, so often seen with radiation injury, and early coverage of the defect is important and must be well planned and executed.

Myocutaneous flaps have suitable advantages for coverage such as good blood supply, enough bulk, long arc, and one stage operation (no delay-procedure).

On the contrary, distant flaps usually require multistage operations and a long hospitalization period. The high complication rate of this type of flap is well known.

The perineal area is under the arc of the gracilis muscle, and this myocutaneous flap is invaluable in reconstruction of the vaginal, the ischial, the anterior and the posterior thigh area.

Gracilis myocutaneous flaps offer positive solution to the problem of a perineal radiation ulcer.

SUMMARY

Perineal radiation ulcers can be repaired with gracilis myocutaneous island flaps. We described a case.
REFERENCES


Fig. 1 Preoperative view. The complexly infected ulcer with a boring type of pain.

Fig. 2 Patient in the lithotomy position with both thighs exposed medically. The skin portion of the flaps are outlined.

Fig. 3 Both gracilis myocutaneous flaps are elevated.

Fig. 4 Flaps are brought to the defect through a subcutaneous tunnel beneath the intact skin. Transferred both flaps are shown. Both donor sites are closed primarily.