

Reconstruction Using V-Y Flap Technique on Vulnus Appertum with Skin Loss in Regio Pedis Dextra

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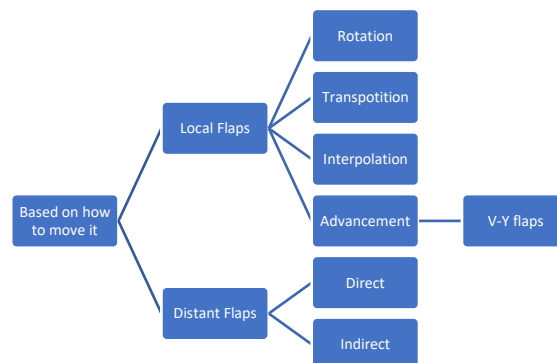
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Abstract: Flap technique is a technique commonly used for reconstruction of various types of skin defects from defects that occur only in skin tissue, to skin defects that are large and extensive and involve multi-tissues. V-Y flap technique is part of the advance flaps. This technique is performed by moving forward to close the defect without being rotated or moved laterally. The technique is simple, and the post operative process easy for both doctor and patient. A 14-year-old male patient came to the hospital's surgical polyclinic with the main complaint of pain in his right leg and an open wound after having a motorcycle accident. Localized status on the patient's right leg there is a round vulnus appertum with a diameter of approximately 3 cm, around the wound there are abrasions skin, bleeding (+), Edema (-), crepitus (-), basic of the defect is connective tissue, range of motion of the ankle and fingers on right leg is still within normal limits. The patient underwent debridement and reconstruction with a local V-Y flap advancement technique.

Keywords: V-Y flap, Vulnus appertum.

1. INTRODUCTION

The autologous tissue flap technique is currently the gold standard for complex types of reconstructive defects.¹ Flap technique is used to close tissue defects that cannot be sutured using primary suture techniques. Flap is a technique for removing tissue by a donor and transferring it to the recipient (the same individual) with intact vascularization, so that the tissue can support itself. The application of the flap design technique can be carried out in various types of skin defects, from defects that only occur in the skin tissue, to large and extensive skin defects that involve multiple tissues. Flap design and transfer are at the intersection of medical science and surgical art, making the procedure highly beneficial or not, depending on the results.² The classification of flap techniques consists of 2 types, namely based on vascularization and based on how to move them. This case report uses a flap technique based on how it is moved with a graphic depicting the classification based on how it is moved as follows:



The v-y flap technique is part of advancement flaps. This technique is carried out by moving forward to close the defect without rotation or movement laterally.

2. CASE REPORT

We reported a case of a 14-year-old male patient came to the surgical clinic at Wangaya Regional Hospital with a chief complaint of pain in the right leg and an open wound after a motorbike accident three days ago after falling from the motorbike, wearing a helmet, the patient fell due to the slippery, sandy road. Patient made a sudden braking then fell to the right and was struck down by his motorbike. The wound was treated at a health service, the wound was treated using moist gauze and sterile gauze.

Examination of vital signs such as blood pressure, pulse rate, respiratory rate, oxygen saturation, and physical examination in other areas of the body are still within normal limits. Localized status on the patient's right leg is a round vulnus appertum measuring approximately 3 cm in diameter, around the wound there are abrasions, bleeding (+), oedema (-), crepitus (-), tenderness (+), CRT < 2 seconds, connective tissue wound base, Range of Motion in the ankle and toes of the right foot is still within normal limits. Active and passive movements in both lower limbs are still within normal limits.



Gambar 1. Vulnus appertum pre operation on pedis dextra

In this patient, debridement of muscle was planned in the operating room and continued with wound closure using the V-Y Flap advancement technique on the wound on the right leg, the incision design was made in the shape of the letter V with each incision 3x3 cm long, then under trimming was carried out to separate the skin and the underlying tissue, then the V flap is pulled superiorly to close the defect and the Y flap simple interruptus is sutured using non-absorbable thread. Next, wound care is carried out 1 day after surgery, then hospitalization for 3 days. Patient is allowed to go home for control and return to the surgical clinic every 3 days. This case report has obtained approval from the patient through informed consent.



Gambar 2. Vulnus appertum post operatif with V-Y flap procedure

3. DISCUSSION

Case above, a 14-year-old male, with a diagnosis of vulnus appertum with a circular wound pattern, debridement and a V-Y flap were performed in the operating room. The purpose of carrying out the V-Y flap procedure on patients includes are 1) preventing tension/pulling in the wound area because the wound is in the extremity area with a high level of mobilization, 2) to maintain good cosmetics of the scar 3) this technique can be used if the wound is not too large.²

This technique is usually performed on wounds with a superficial type, so the involvement of vascular damage is minimal and it is hoped that tissue growth will be better.⁴

Cases of vulnus appertum accompanied by vulnus excoriatum in this patient usually occur in patients with the mechanism of injury caused by a motorbike accident. Injuries often occur on prominent parts of the body such as the head and extremities.⁵

Complications of the V-Y flap can occur due to vascular insufficiency caused by compression from the hematoma in the defect.² Other complications that can occur include infection in the area where the procedure is performed, and death of the tissue where the flap is performed.⁴

4. CONCLUSION

Reconstruction with V-Y flap technique in superficial wounds in mobile areas such as leg can provide good result, the surgical procedure is simple and takes a short time.

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