

Abstract

Peroneal Perforator Flap

Duke Whan Chung, M.D., Joon Sung Hwang, M.D.

Department of Orthopaedic Surgery, Kyung Hee University, Seoul, Korea

Materials and Methods: Total number of peroneal perforator flap is 14 cases, which 10 cases were man, 4 cases were woman. The range of age was 12 years old minimally and until 63 years old. The trauma was most common etiology, which was like traffic accidents, 9 cases. We confirmed tibialis anterior artery patency by doppler flow meter, angiography as preoperative evaluation.

Results: 1. The success rate was 91%, that in 14 cases, 13 cases were succeeded. 2. To obtain successful result of peroneal flap, one must have the anatomic concept for vascular pattern, 8 cases were between peroneus muscle and soleus muscle branch type but, 3 cases were through soleus muscle branch type, so we treated these cases by using soleus muscle including peroneal perforating branch not to injury perforating artery directly. 3. The pedicle size was between minimally 2 × 2.5 cm and maximally 6.5 × 8.5 cm so we could treat large recipient site. 4. The pedicle length was between minimally 3.2 cm and maximally 11.5cm, average 7.5 cm. 5. The diameter of perforating artery was estimated by inspection, that was about 0.2-0.5 cm

Conclusion: The peroneal perforating artery flap has merits that we can approach in avascular zone and has wide movable range from foot to distal femur and little donor site morbidity and can harvest osteocutaneous flap. The weak point was the irregular anatomy of nutrient artery and not to contain sensory nerve.

Key Words: Peroneal artery, Perforator flap, Vascular anatomy

3

2 . 10

가 . 3

(monitoring flap)

(buoy flap)

. 2

(osteocutaneous

flap),

가 1

(osteocutaneous flap)

가

가 3

가

가

가

가 가

reversed flap

doppler flow meter,

가

가

doppler flow meter

pedicled

(perforating cutaneous branch)

flap

1987

2002

14

(prone position)가

doppler

14

10 , 4

. doppler

12

63

가

가 9

doppler

Achilles

가
 (Fig. 1). 가
 (peroneus) 가 (soleus) tunnel (Fig. 3).
 가 가
 가 가 (pedi-
 cle) , , (pedi-
 artery) (main peroneal
 artery)
 (coagulation) 가 [] 6.5×8.5 cm
 가 2×2.5 cm 가 (pedicle)
 3.2 cm 11.5 cm 7.5
 cm
 dissection (Fig. 2). dissection
 (rotation arc) 가 가
 가
 0.2~0.5 mm
 reversed
 peroneal flap 가

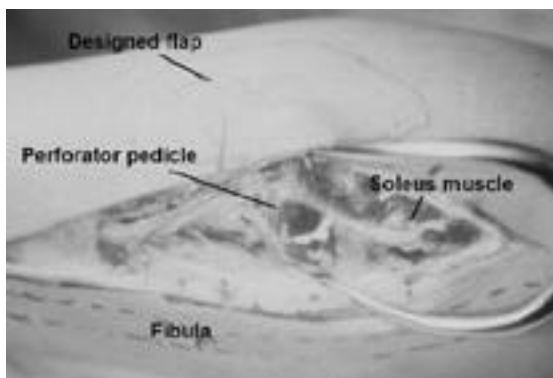


Fig. 1. After we evaluated by doppler flow meter, we dissected around perforator and found the perforator of peroneal arter.

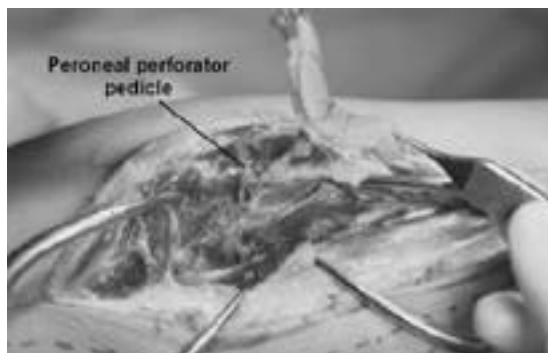


Fig. 2. We harvested peroneal perforator flap, 5 × 8 cm sized.

가 가 ,^{1,20} , 4가
 (arcade artery)
 (peforator artery) 가
 가 . 8 가
 가 3 가
 가
 가 가
 가 . 가
 가 .
 14 13
 , 1 2
 1 가
 가 4 가
 가 . 14 13
 91% .
 1 가 가
 가 가

가 가 가
 . 4 가
 가
 가
 1~5 . 13
 가 3 가
 가
 가
 6 가

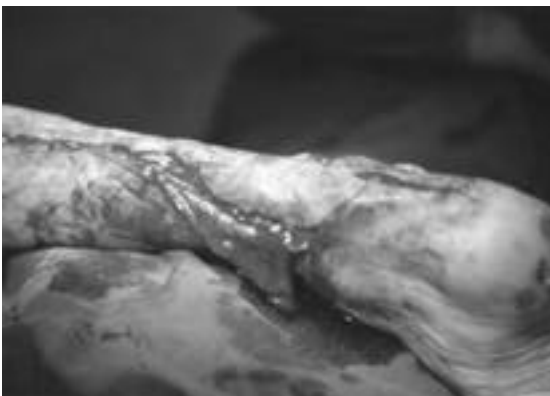


Fig. 3. We covered exposed achilles tendon by distally based peroneal perforator flap.

1983 Asko-Seljavaara free style free flap
 , 1987 Taylor Palmer
 374
^{21,22} 1989 Koshimã Soeda
 (musculocutaneous perforator)
 “ (Perforator flap) ”
 fasciocutaneous
 flap ,
 (fascial vascular plexus)
 가 ,
 Hollock

가 perforator (free vascularized fibular graft)
, Nakajima 가

가 가 (osteomyocutaneous free flap) -
가 (osteocutaneous free flap)¹
2002 Sixth International Course on (composite tissue transfer)
Perforator Flaps 2001

1 (monitoring flap)
(buoy flap³

2

(Muscle perforator or
Myocutaneous perforator) 3

(septal perforator or septocutaneous perforator) 4 (free vascularized flap)²
가

(Muscle
(Musculocutaneous flap) , 5 가

(septal perforator flap) Achilles tendon
(septocutaneous flap) .⁴ cross leg pedicle flap
free vascularized flap

가 surgery
Myocutaneous flap fasciocutaneous , cross leg pedicle
flap

(perforator flap) (free vascularized flap)
가

(controlled 가
thickness) dissection
.⁵
one stage

neurovascular island flap radial 가 saphenous flap A. Gilbert가
 forearm flap reversed radial forearm sural flap¹¹ anterior
 flap,^{12,14} ulnar flap⁹ , tibial flap¹⁹ peroneal artery per-
 medial plantar flap,¹¹ anterior tibial oneal flap .
 flap,¹⁹ dorsalis pedis rotational flap,¹⁵ saphenous flap,⁸ sural flap,¹⁵ tibial flap¹⁹
 dorsalis pedis rotational flap medial 가
 plantar flap .
 가 dorsalis
 pedis flap 가 (dor-
 salis pedis flap) sural flap 3
 reversed flap dorsalis
 pedis flap reversed .
 medial planter flap 가
 가 .
 A. Gilbert⁵ “ sural artery 가
 ” 가 sural flap
 musculo-cuta .
 neous flap .
 vascular pedicled flap gas- 14 peroneal artery
 trocnemius, soleus peroneal flap
 pedicled flap Mc Graw¹⁸가 .
 neurovascular island flap, Acland Godin⁸ 14 13 가 91%

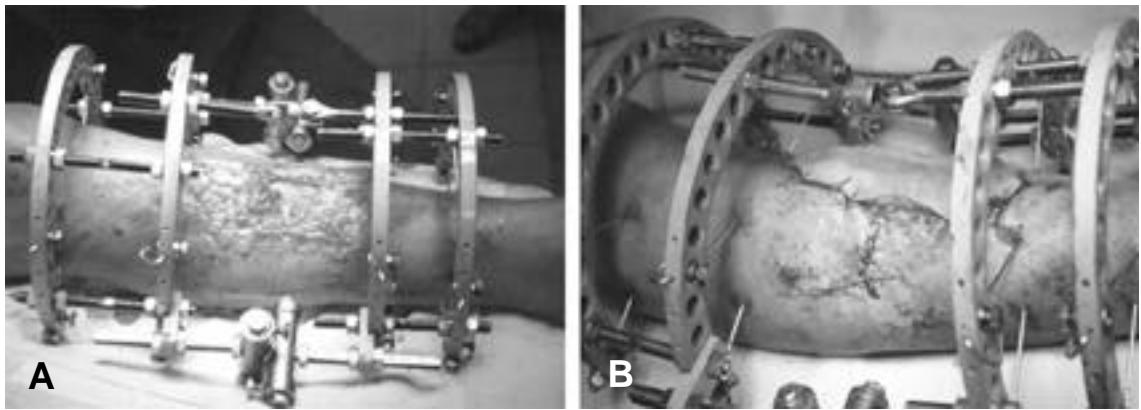


Fig. 4. present other case about tibia soft tissue defect that covered by peroneal perforator flap, (A) presents large anterior tibia soft tissue defect and (B) present postoperative site covered by peroneal perforator flap.

peroneal flap flap

가

가

가

osteocutaneous flap

가

가

Peroneal flap fibula osteocutaneous flap

가

sural flap

sural artery 가

sural flap (Fig. 4).

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