TENSOR FASCIA LATA CROSS THIGH MYOCUTANEOUS FLAP FOR HEEL RESURFACING

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SUMMARY

Heel resurfacing by cross thigh Tensor Facia Lata myocutaneous flap successfully performed in three cases of extensive soft tissue defects has been presented.

It's an excellent procedure for extensive defects of heel where local myocutaneous flaps from sole may fall short or where the posterior tibial vessels are damaged. It is also a good alternative for heel reconstruction where microsurgical facilities for free flap transfer are not available.

Full thickness soft tissue loss around the heel is a difficult reconstructive surgical problem. Split skin grafting is good as an early temporary cover. Subsequent breakdown is inevitable and gait gets altered (Sommerlad, B. L. et al., 1978). Supergrafting increases the number of operations and the cost. Distant direct and pedicled flaps are known for their practical difficulties (Ger., R., 1975). With the development of myocutaneous flaps, muscle and fasciocutaneous flaps, it has now become easier to cover these defects. The flexor digitorum brevis muscle and myocutaneous flap (Ger., R., 1975; Hartram, P. F. et al., 1980; Mathes, J. S. et al., 1982); Neuro-vascular island flap from the 1st web space of the foot (Gulyas, G. et al., 1984); Lateral calcaneal artery flap (Homes et al., 1984) and instep sole fasciocutaneous flaps are good for smaller heel defects, but not for the extensive heel defects. A justified answer to this problem is a free flap by micro-surgery (Mathes et al., 1982) but it requires a trained staff and elaborate set up.

Case Report

(i) An old man of 55 years sustained a crush injury of the heel about one month back with a complete loss of heel padding. He had an ulcer of 10 cm $\times$ 7 cm around the heel when he was referred to us from the general surgery unit (Fig. 1). A T.F.L. myocutaneous flap was used for covering the defect (Fig. 2 & 3).

(ii) A young man of 26 years was admitted

Fig. 1. Showing the full thickness loss of tissue around the heel in an old man of 55 years (Case 1).

Fig. 2. Showing the position of the limb during the period of flap attachment.

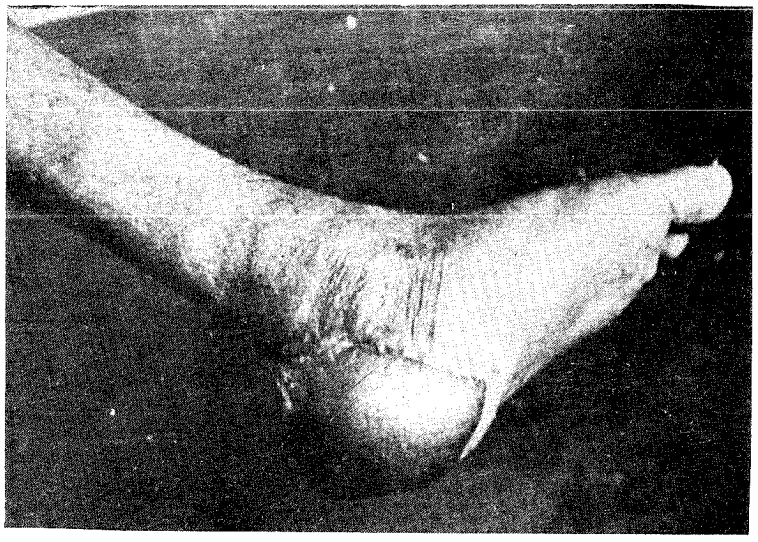

Fig. 3. Post-operative result of Case 1.

with a raw area around the heel following an accident (Fig. 4). A T.F.L. flap in position is shown in Fig. 5.

(iii) A 2 years old child was admitted with a raw area around heel and lateral malleolus due to a road side accident (Fig. 6). The same after treatment with a T.F.L. flap (Fig. 7).

Operative Procedure

The patient was operated under general anaesthesia. A Tensor fascia lata flap was raised from the other side for covering the defect. After completion of the attachment of the flap, the limbs were immobilized in position by plaster.

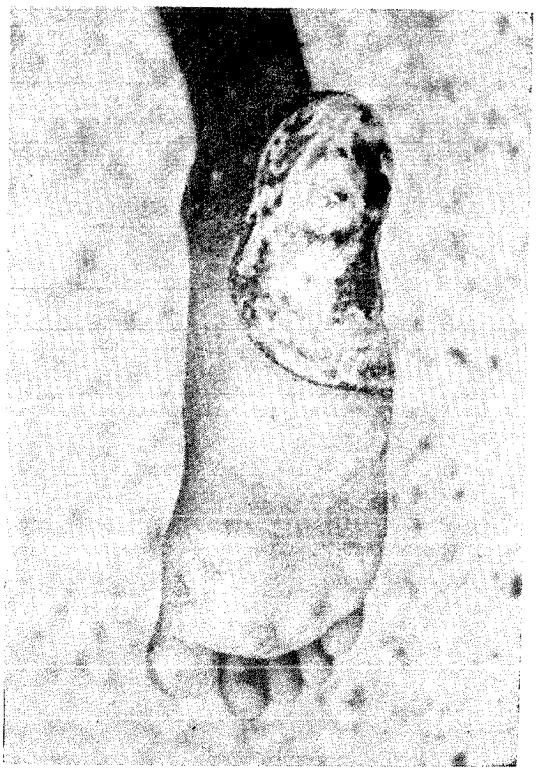

Fig. 4. Raw area around heel with exposed calcaneum in a young man (Case 2).

Fig. 5. Post-operative result of Case 2.

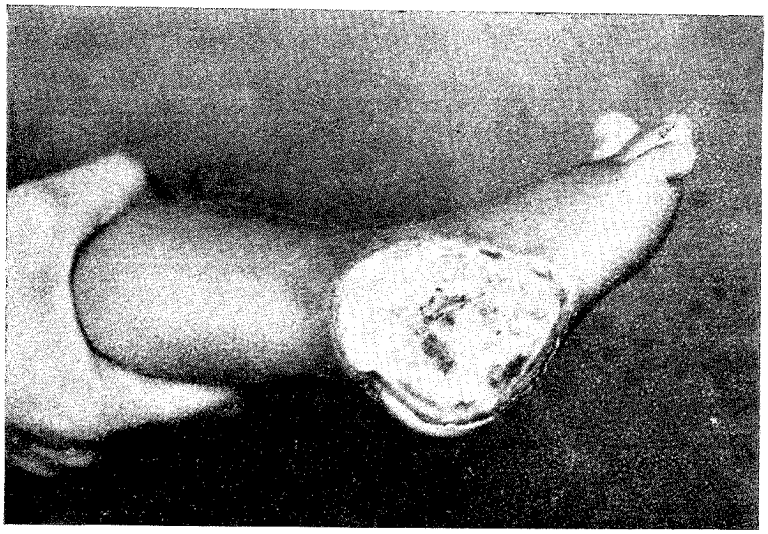

Fig. 6. Raw area around heel and lateral malleolus due to road side accident in a 2 years old child (Case 3).

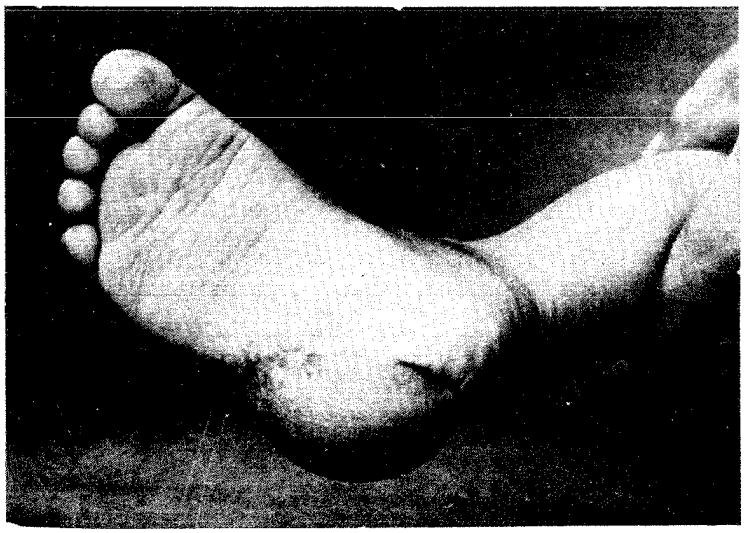

Fig. 7. Post-operative result of Case 3.

The insetting of the flap was done after three weeks. Active and passive exercises for the knees were started from the second day onwards. Full weight bearing was started gradually after 6 weeks of the healing. Shoes with heel pad and microcellulose rubber sole was provided. During the two years of follow-up no ulceration was noticed over the weight bearing area of the heel.

Discussion and Conclusions

Tensor fascia lata myocutaneous flap can be used for resurfacing extensive heel defects as a cross thigh flap. Practical problems which are faced in conventional cross leg flaps described in detail by (Morris, 1978) were not faced at all with the use of this flap. It is superior because (a) Length, breadth, ratio does not worry the surgeon, (b) Delaying is not required, (c) Flap necrosis was not noticed, (d) Provides better padding (muscle & facial), (e) Fixation is better with freedom of movement at distal joints, (f) Due to the long pedicle of these flaps there is more working space to take care of donor area for subsequent post-operative dressings during the period of immobilization, (g) Hospitalization period and cost of the treatment was less, (h) Protective sensations appear within a year's time and (i) The donor defect is cosmetically acceptable and can be easily covered.

The final results are comparable to free flap transfers. This procedure is applicable for extensive loss involving the sole also (where short muscle or myocutaneous flaps are not possible) or where posterior tibial or dorsalis-pedis vessels are damaged.

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