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Management of Loss of Skin Substance of the Hand: About A 12 Cases with Review of the Literature

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Review Article

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Abstract

Never has reconstructive surgery for loss of cutaneous substance of the hand made so much progress as over the last thirty years thanks to a better knowledge of the cutaneous vascularization, as well as to the possibilities of raising island flaps with reverse flow. We report 12 cases of coverage of loss of cutaneous substance of the hand collected within the Department of Orthopedic Surgery and Traumatology of the Ibn Sina Souissi Hospital in Rabat.

Keywords: Loss of Substance; Hand; Flaps

Introduction

Never has reconstructive surgery for loss of cutaneous substance of the hand made so much progress as over the last thirty years, essentially thanks to a better knowledge of the cutaneous vascularization and to the possibilities of raising flaps in islands with retrograde flow. . The surgeon thus draws on a range of technical procedures allowing him to treat any loss of cutaneous substance, using the flap as part of the global management of the open trauma of the hand and often represents only one of the stages, in this case, the ultimate.

Material and Methods

We report through this work the experience of the Department of Orthopedic Surgery and Traumatology of the university hospital Ibn Sina, Souissi of Rabat in terms of coverage of loss of cutaneous substance of the hand through 12 cases. The majority of patients were operated on as an emergency and benefited from a therapeutic sequence consisting of careful debridement, osteosynthesis when necessary, tendon repair and coverage by muscle or fasciocutaneous flap.

Results

All patients were adult males with an age ranging from 22 to 28 years and a median age of 23 years.

In all cases, these were work related accidents among manual workers.

The loss of substance involved:

- The dorsal face of the 2nd phalanx (P2) of the thumb In 02 cases, coverage was performed by the kite flap taken from the dorsal face of the 1st phalanx of the second finger.
- The dorsal face of the 1st phalanx of the 2nd finger in 2 cases, and the dorsal face of the distal interphalangeal joint in 02 cases. Coverage was achieved with a dorsal intermetacarpal flap.
- The dorsal surface of the 2nd phalanx in the 4 other patients, the covering was carried out by the cross finger de-epidermized reversed grafted flap.

No flap pain was noted. Weaning was performed at the end of the 3rd week for the reversed epidermalized cross-finger flap, followed by functional rehabilitation. All patients returned to work after eight weeks without functional sequelae.

Discussion

The injured population is an exclusively active, young and male population. These are mainly occupational accidents involving manual workers due to carelessness and lack of safety.

The ideal skin cover must allow the simultaneous reconstruction of associated lesions and be compatible with early mobilization. It may require a simple skin graft, but when the subsoil is unsuitable for a graft, flap coverage is necessary [1,2].

Before harvesting a remote flap, the possibility of using a local flap should be investigated [3]. In our series, the extent of the defect led to the use of remote flaps. Thus, the de-epidermized inverted cross-finger flap taken from the neighboring finger and allowing the entire functional unit to be covered is used in two of our patients and represents our first therapeutic choice for covering losses of dorsal substance of the middle phalanx [3,4] for the dorsal aspect of the first phalanx and the dorsal inter-metacarpal joint. It competes with the dorsal intermetacarpal flap used in 2 of our patients. For the 2 patients with loss of substance of the dorsal side of P2 of the thumb, the kite flap constitutes the best means of coverage while also providing cutaneous sensitivity.

Conclusion

The development of subcutaneous and fasciocutaneous flaps currently offer wide possibilities of coverage by local and regional procedures, making it possible to ensure in almost all cases the treatment of loss of cutaneous substance of the hand with minor aesthetic sequelae and without functional sequelae.

References

1. Rohan P, Chang J (2006) Reconstruction of hand soft-tissue defects: alternatives to the radial forearm fasciocutaneous flap. J Hand Surg 31: 847-856.

2. Del Piñal, Francisco (2005) Overcoming soft-tissue deficiency in toe-to-hand transfer using a dorsalis pedis fasciosubcutaneous toe free flap: Surgical technique. J Hand Surg 30: 111-119.

3. Neuwirth, Maximilian, Hubmer M, Koch H (2013) The posterior interosseous artery flap: Clinical results with special emphasis on donor site morbidity. J Plastic, Reconstructive & Aesthetic Surg 66: 623-628.

4. Dogra BB (2006) Posterior interosseous artery flap for hand defects. Med J Armed Forces India 62: 33-35.