

THE MANY-TAILED FLAP FOR MULTIPLE FINGER INJURIES

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In 1974, Miura and Nakamura described the use of paired abdominal flaps for soft tissue cover of circumferential hand injuries. The same principle of opposing flaps can easily be adapted to create a series of versatile flaps to cover simultaneously multiple soft tissue defects on several fingers of one hand (Fig. 1, A, B and C).

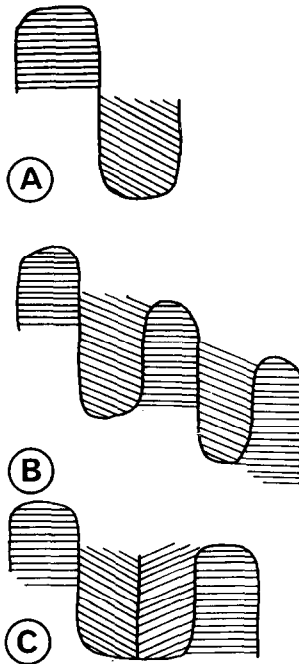


FIG. 1A. Principle of paired flaps.

FIG. 1B. Series of 4 alternating flaps.

FIG. 1C. Series of 4 flaps partly alternating, partly based on the same side.

CASE REPORT

An 11-year-old, mentally retarded boy climbed on the roof of the school house and touched a live electric wire, causing localised full-thickness burns of four fingers of his right hand. At operation four days later the wounds were excised under general anaesthesia. The resulting major defects were on the latero-volar aspects of the right middle, ring and little fingers exposing the flexor tendons and both neurovascular bundles and on the latero-dorsal aspect of the index finger, exposing the extensor tendon (Fig. 2). The size and relative position of the defects to each other were plotted on a piece of cloth and a series of opposing flaps were outlined, the two central flaps opposing the two lateral flaps (Figs. 1C and 3). The pattern was transferred to the

boy's left lower chest and upper abdominal wall. The four flaps were raised, the donor site closed by simple suture and the flaps sutured onto the finger defects (Figs. 4 and 5). The right arm was held in a comfortable position by a simple bandage. Although the boy was a rather difficult child, nursing presented no problems and he could move around the ward freely. Three weeks later the pedicles were divided. The wounds healed without complication and all the finger defects were covered with well vascularised tissue (Fig. 6). The donor site healed with a linear scar (Fig. 7).

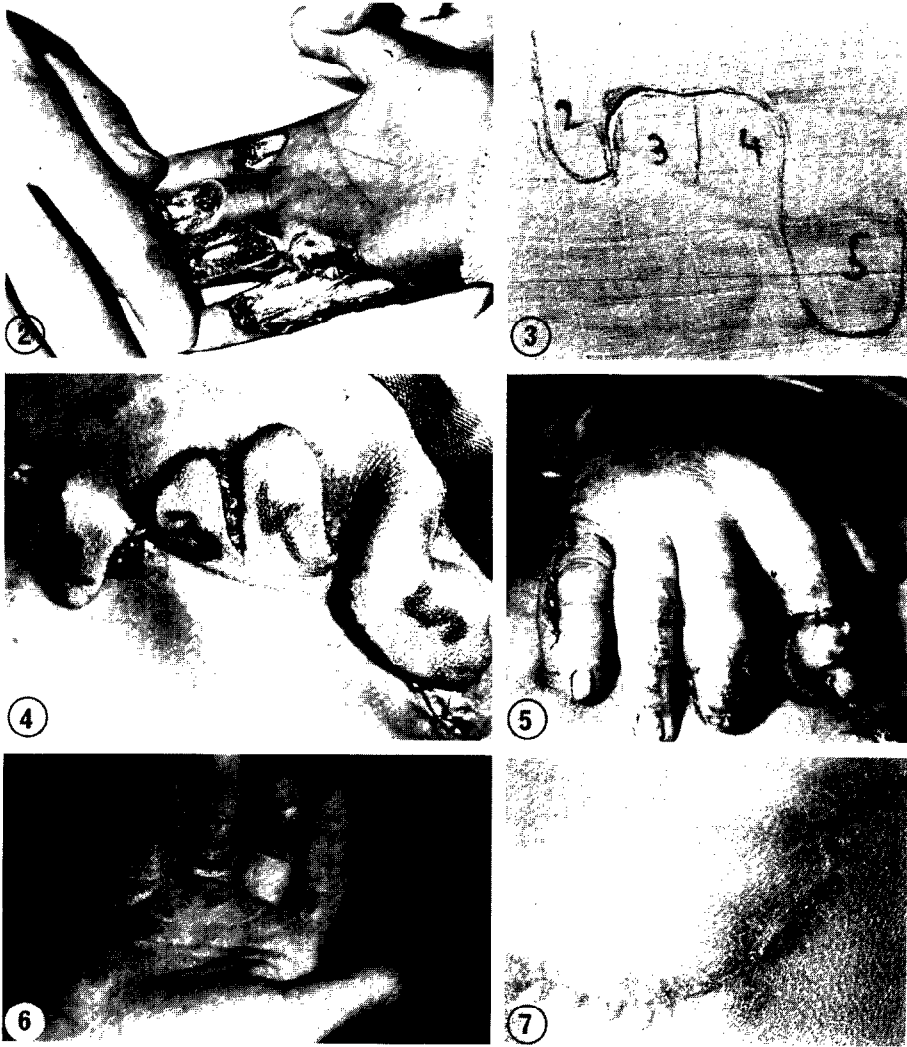


FIG. 2. Right hand after excision of the full-thickness burns, showing the exposed flexor tendons and neurovascular bundles.

FIG. 3. Preoperative planning of the flaps.

FIG. 4. Flaps elevated and donor site closed by primary suture.

FIG. 5. Flaps sutured to the finger defects.

FIG. 6. Appearance after inset of the flaps.

FIG. 7. Donor site one month after operation.

SUMMARY

Using the principle of opposing flaps, multiple soft tissue defects on several fingers of one hand can be covered in one operation with a series of carefully designed opposing flaps. The donor site can be closed by suture leaving a linear, relatively inconspicuous scar.

REFERENCES

- MIURA, T. and NAKAMURA, R. (1974). The use of paired flaps to simultaneously cover the dorsal and volar surfaces of a raw hand. *Plastic and Reconstructive Surgery*, **54**, 286.