

Hand Clinic, Orthopedic Hospital, Copenhagen, Denmark

OPERATION FOR DUPUYTREN'S CONTRACTURE BY THE METHOD OF McCASH

LIS ZACHARIAE

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The open palm technique in operating for Dupuytren's contracture was described by McCash (1961) to a meeting in the Scandinavian Club for Hand Surgery. Later, McCash (1964) published his method which he recommends in advanced cases of Dupuytren's contracture.

The method is simple: The fibrosis in the palm is removed as radically as desired through a transverse incision which is left open and permitted to granulate and epithelialize under close supervision, with splinting and exercise therapy. Although the method is untraditional and although primarily one is loathe to leave a wound in the palm open, there are, on further consideration, so many aspects to this procedure that it was tested in the Department of Hand Surgery of the Orthopaedic Hospital, Copenhagen.

MATERIAL AND METHOD

The operation was performed on 12 hands in 12 patients, all men aged 35-60. All had very severe fibroses with contracture of several fingers and cutaneous changes. A transverse incision was applied to the palm and smaller incisions on the fingers according to the extent of the fibrosis. All the wounds on the fingers were sutured primarily, while the wounds in the palm were left partially open in an area depending upon the tension (Figure 1 and 3). Haemostasis was obtained, and it was verified that the wound edges were not inverted. The wound was covered with gauze soaked in saline and a pressure dressing. The dressing was changed daily during the first 3 days, thereafter at intervals of 5-7 days until the wound had healed. The hand was immobilized in the dressing for the first week, and thereafter a splint was applied (Figure 6), extending and immobilizing the palm but allowing movement of the fingers. Ergotherapy was used as required. The patients were discharged after 3 days and further treatment was on an out-patient basis.

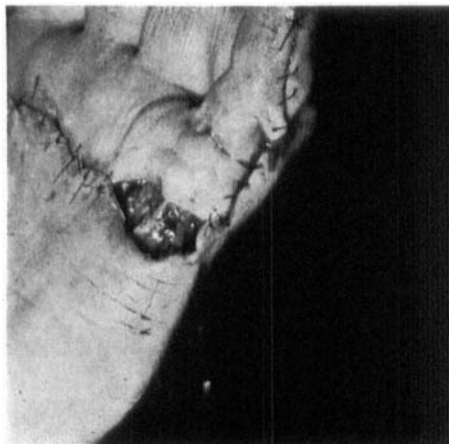


Figure 1. Small skin-defect after operation for Dupuytren.

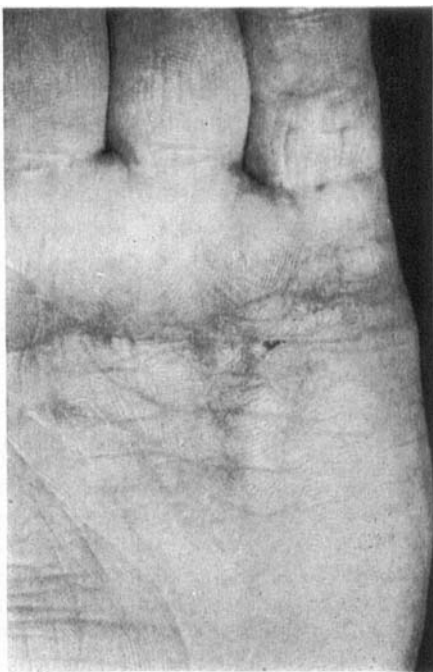


Figure 2. Same as Figure 1. The scar is perfect and the wound was healed 4 weeks after operation.

RESULTS

Out of the 12 cases 8 became perfect, with a nice scar in the palm and free mobility of the fingers with no or very slight limitation of extension. Two results are poor, one because of post-traumatic dystrophy and the other one because the patient failed to attend follow-up

Figure 3. *Big skin defect after operation.*

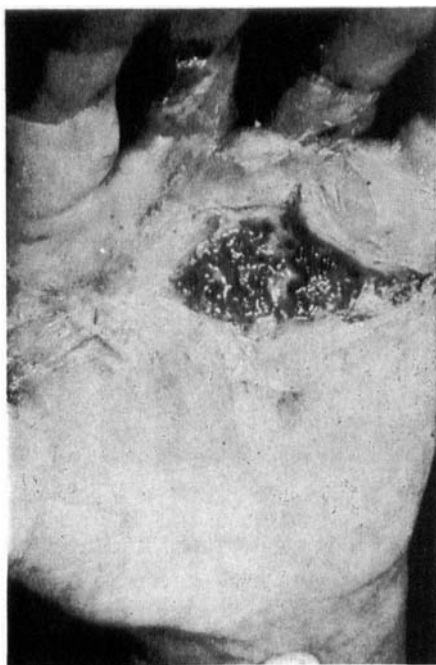


Figure 4. *Same as Figure 3 after 3 weeks.*



Figure 5. Same as Figures 3 and 4. The scar is perfect, but there is slight limitation of extension. The wound was healed in 6 weeks.



Figure 6. Splint for postoperative treatment. Vola is extended and the interphalangeal joints can be moved freely.

and treatment for one month immediately after the wound had healed. Therefore, he did not receive the needed splinting and exercise therapy and developed a severe contracture. The remaining 2 results must be called fair. One developed gangrene of the little finger which had to

be amputated, but the wound in the palm healed by primary intention. The other patient had moderate limitation of extension in the fingers, but the scar in the palm was nice and hand function good. The wounds healed in 3-6 weeks. Two healed in 6 weeks, two in 5 weeks, 7 in 4 weeks, and one in 3 weeks. At the time of healing there was free flexion in all cases but one, who had post-traumatic dystrophy. There was no case of postoperative haematoma or infection.

DISCUSSION

In most cases of Dupuytren's contracture it is possible by employing various incisions and procedures of plastic repair to obtain primary skin cover without tension. However, there are cases in which a transverse incision of the palm has to be employed because of extensive fibrosis, and when the fingers are extended a skin defect arises which cannot be sutured without tension. A free skin flap at this site is apt to result in a thin, sensitive scar, because it is applied directly on the tendon sheath, vessels, and nerves.

If the wound is sutured, nevertheless, skin slough in the middle of the palm is a common result, aggravated in the event of a haematoma. Moreover, healing in this site is compromised by the poor vascularization in the palm (Conway & Stark 1954). A skin slough like this has to be removed when it has become demarcated and later secondary grafting may be performed. But often even rather large defects heal so rapidly that there is simply not time for grafting, and the resulting scars are usually surprisingly nice. It is reasonable to leave the wound open primarily to save the time which it takes the necrosis to slough off. This is in fact the basic idea of McCash's method.

The present material is too selected to permit a real analysis, but the results seem to be beyond what might be expected by any other method in these advanced cases. However, the method requires close follow-up of the patients for about two months after the operation, and the splinting and exercise therapy are important so that the scar does not shrink. The only really poor result in the present material was due to the fact that the patient failed to attend after-treatment.

It may be concluded on the basis of the present author's experience that the McCash open palm method is applicable in selected, advanced cases of Dupuytren's contracture in which a skin cover is not believed to be obtained in other ways. It may afford good results, but requires close after-care of the patient for a long time after the operation.

SUMMARY

The open palm technique for Dupuytren's contracture, advocated by McCash, was tested in the Department of Hand Surgery of the Orthopaedic Hospital, Copenhagen, in 12 cases. The results were perfect in 8 cases, fair in 2, and poor in 2. The wounds healed in 3-6 weeks, and no haematomas or infections occurred. All the patients had severe changes, involving the skin. It is concluded that the McCash method is applicable in selected, advanced cases and that it requires close follow-up and after-treatment by splinting and ergotherapy for about 2 months after the operation.

REFERENCES

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- McCash, C. R. (1964) The open palm technique in Dupuytren's contracture. *Brit. J. plast. Surg.* **17**, 271.