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AMPUTATIONS IN THE TREATMENT OF DUPUYTREN'S DISEASE

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23 finger amputations in 19 patients operated on for Dupuytren's disease were reviewed 6 months to 8.5 years after operation (mean 4 years). The distribution of amputations were 17 little fingers and six ring fingers.

We found a recurrent lack of extension in nine out of 16 finger amputations distal to the MP joint and painful neuroma or phantom limb pain in five out of seven little finger amputations through or proximal to the MP joint.

When amputation in the little finger is necessary, disarticulation of the MP joint may be preferable to amputation at a more distal level.

Alternatives to finger amputation should be sought in difficult cases of Dupuytren's disease. *Journal of Hand Surgery (British and European Volume, 1993) 18B: 781-782*

It is well-known that after surgical treatment of Dupuytren's contracture involving the PIP joint, the prognosis is worse for the little finger than the other fingers (Legge and McFarlane, 1980), and it is felt that the little finger with this condition is the most difficult to treat (Lamb, 1981).

Amputation may be the last resort in the treatment of Dupuytren's contracture in the little finger, but very little has been written about the prognosis afterwards.

The purpose of this study was to assess the results and complications after amputation of ring and/or little finger in the treatment of Dupuytren's contracture.

PATIENTS AND METHODS

During a period of 6 years (1981-1987) 1031 operations for Dupuytren's contracture were performed. 25 patients, two female and 23 male, underwent amputation. In two of these cases bilateral amputation of the little finger was performed, and in another two cases amputations of both the ring and little fingers on one hand were carried out. The number of amputations thus totalled 29 fingers.

All patients had earlier been treated by fasciectomy. In 16 cases the amputation was performed as the second operation, in seven as the third and in four as the fourth operation.

The indications for amputation were recurrence of the contracture in 19 cases, pain due to nerve lesions in four, deep necrosis in four cases and skin necrosis in two. The level and distribution of the amputations are shown in Table 1.

Clinical follow-up was carried out in 19 patients with 23 amputations. Three patients had died before the investigation and another three could not be traced. The follow-up included 17 little and 6 ring fingers (Table 1). The median age at follow-up was 58 years (41-79).

In 22 of 23 cases, a dorsal flap was used for skin cover of the volar side of the amputation stump.

Table 1—Level of amputation and distribution in 29 amputations for Dupuytren's contracture and at follow-up in 23 cases

| Finger | Operated | | Follow-up | |
|-------------------------------|----------|--------|-----------|--------|
| | Ring | Little | Ring | Little |
| Level of amputation: | | | | |
| PIP joint or proximal phalanx | 7 | 14 | 6 | 10 |
| MP joint or above | 0 | 8 | 0 | 7 |

RESULTS

23 amputations were followed up 6 months to 8.5 years after the operation (mean 4 years).

The post-operative course was uneventful in 19 cases but complicated by skin necrosis in two cases, in which healing took place within 2 weeks. There was superficial infection in one case and gangrene of the stump, which led to MP disarticulation in one case.

The late post-operative results at follow-up are shown in Table 2. Recurrence of the contracture was noted in nine out of 16 amputations distal to the MP joint,

Table 2—Re-amputation and complaints at follow-up on average 4 years after amputation of the ring or little finger in 23 cases of Dupuytren's disease

| Complaints | Distribution and level of amputation | | |
|-----------------------------|--------------------------------------|---------------|----------|
| | Ring finger | Distal little | Proximal |
| Re-amputations | 0 | No. 2 | 0 |
| Complaints: | | | |
| Contracture with discomfort | 1 | 6 | 0 |
| Neuroma | 0 | 2 | 3 |
| Lack of sensibility | 0 | 4 | 0 |
| Phantom pain | 0 | 2 | 2 |

resulting in complaints in 7 cases and re-amputation in two.

Neuroma and phantom pain was noted in five out of seven amputations at the MP joint level; none of these patients had further surgery performed.

DISCUSSION

In previous studies the rates of amputation in connection with treatment of Dupuytren's contracture were 5 to 13%. In some patients amputation was performed alone, while others had a palmar fasciectomy carried out in addition to the amputation (Honner et al, 1971; Hueston, 1963; Rodrigo et al, 1976; Barton, 1984).

The patients in the present study represent a highly selected group of only 29 amputations out of 1031 operations.

Primary amputation was not done in any of the cases whereas repeated palmar fasciectomy was performed in addition to the amputation in all cases. In previous studies as well as in the present series, the majority of the amputations were performed in the little finger, although the disease is most frequently located to the ring finger. This is in accordance with Lamb (1981) who found the little finger the most difficult digit to treat. We also found that recurrent contracture is a frequent complication in cases treated by amputation distal to the MP joint in the little finger.

As a consequence, alternative treatment to distal amputation in connection with recurrent contracture of the little finger should be sought.

Amputation at or proximal to the MP joint may be the treatment of choice. However, in our study neuromata and phantom pains were more frequent after disarticulation at the MP joint than in amputation at a more distal level.

Minor complaints such as cold intolerance or dysaesthesia were frequent in all the groups and this has to be mentioned to patients before operation.

An alternative to amputation could be arthrodesis of the PIP joint, as suggested by Moberg (1973). This may facilitate power grip, but may also result in recurrence of the contracture, as in amputations distal to the MP joint.

The problem is different in the ring finger because ulnar deep fibrosis is only associated with the little finger. A more lasting resolution after distal amputation can therefore be expected in the ring finger. In the middle finger, amputation at or proximal to the MP joint should be avoided if possible.

In conclusion, we find that amputation of the ring and especially the little finger in connection with Dupuytren's contracture is often followed by late complications. These include recurrent contracture after distal amputation, especially in the little finger, and neuromata after more proximal amputations. We suggest that amputation should be limited to a small group of patients needing surgery for recurrent disease, and alternatives to amputation should be sought.

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