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MODIFICATION OF THE SURGICAL CORRECTION OF LUMBRICAL REPLACEMENT - A LONG TERM FOLLOW UP -

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As introduction I like to mention that the 5-Tailed Palmaris Longus Transfer as well as 5-Tailed Sublimis Transfer used by us as lumbrical replacement in intrinsic minus fingers has been seen by Dr. H. Srinivasan and he has requested us in December, 2004 to do a long term follow up, so that our procedure become known widely.
The good success of our mentioned procedures has brought more and more cases to us by Health Workers and by satisfied patients.
We feel encouraged now to explain the value of the 5-tailed procedures, the advantages of our modified methods and to present the results of these procedures done by us in the year 2003 to 2005 and were followed up till 2012.
We have seen failures of Brand’s EF4T among H.D. cases, who came to us for Re-operation. During the year 2000-2002 THIRTY patients who were admitted for reoperation for after failed EF4T, FDS4T, and PL4T have undergone this method.
OUTCOME OF THE BRAND’S FOUR TAIRED TRANSFER IN LUMBRICAL REPLACEMENT

- Ulnar Guttering of extensors
- Ulnar deviation of index at MCP joint
- Slackening of transfer slip (function)
- Re-clawing (see PIP Joint level)

- De-rotation of index finger at MCP joint
- Overriding of index over middle finger
- Disturbed 3 finger pinch etc

Pre Re operative views showing chain of related deformity
In the Original Article REOPERATION IN FAILED CORRECTION OF CLAW FINGERS Beine (2002) showed that a modification done at index finger in a case of failed EF4T changing it into an EF5T operation gave a successful result of the earlier considered failed EF4T
The MCP-joint of the Index finger is more mobile than the MCP-joint at Middle or Ring finger.

Hence the guttering tendency of the Extensor tendons of the index finger is more. Therefore to keep two Transfer tendon slips one to each lateral band for correcting the Index finger in ulnar palsy takes wisely care of keeping these Extensor tendons more in middle position of their range of movement.
Pre operative History and assessment including muscle assessment According to MRC Scale are certainly to be done as always in the routine work of RCS
SURGICAL PROCEDURE OF FIVE TAILED
For each one of the mentioned 5-Tailed transfers, be it either 5-Tailed Palmaris Longus Transfer or 5-Tailed Sublimis Transfer, one more skin incision was needed compared to the described EF4T of Brand (1964), or Sublimis Transfer as shown in the book of Fritschi (1971). The incision is a dorso-lateral one along the middle two quarters of the index finger on the radial side. All other incision are practically the same as for the widely practiced 4-Tailed procedures.
The route by the tunneller starts from this incision for the additional Transfer Slip specifically from point of the radial lateral band of the dorsal expansion and is then following the lumbrical route of the index finger to the prepared midpalm incision where the motor tendinous part had already been split into the 5 Transfer tail slips.
The radial dorso-lat. transfer slip will be usually sutured to the dorsal expansion as the first one and under PROPER Tension according to degree of clawing.
Next we use to suture the little finger transfer slip with 5mm tension
Suturing the rest of the transfer slips just without slack between the sutured ones
Details to be checked by physiotherapist at long term follow-up

- During open hand no hyperextension of Index, Middle, Ring and little finger at MCP-joint
- During keeping hand in lumbrical position also no hyperextension of Index, Middle, Ring and little finger at MCP-joint (no clawing)
- Ability to close the fist fully
- Ability to do the pinching (with 3 fingers) to opposed thumb (So far our description.)
TOTAL OPERATED CASES : 132

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<th>PL5T</th>
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<td>Cases</td>
<td>88</td>
<td>44</td>
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AGE OF THE PATIENTS

- 12 - 15: 16
- 16 - 30: 86
- 31 - 45: 30
RESULTS:

AT THE END OF THE STUDY 75% HAD MAINTAINED A GOOD RESULTS.

15% OF THE PATIENTS SHOWED MILD CLAWING (THIS IS DUE TO EARLY HEAVY WORK).

10% OF THE PATIENTS DID NOT COME FOR FOLLOW-UP INSPITE OF BEING INVITED.
CONCLUSION

As the Modified Surgical Procedures of correction of lumbrical replacement which allow a higher success rate, the 5-tailed Palmaris longus transfer and the 5-tailed sublimes transfer, will remain the standard procedures of reconstructive surgery of Leprosy at our referral Hospital of Sivananda Rehabilitation Home.
Finally
Patient satisfied regarding functional activities of basic things.(Activities of daily living)
To
The GLRA-India, Chennai
Dr. August Otto Beine, Chief Medical Officer, Sivananda Rehabilitation Home & The Management of Sivananda Rehabilitation Home, India

FOR SPONSORING
THANKS