The South African Society for Surgery of the Hand

Die Suid-Afrikaanse Vereniging vir Handchirurgie

28 CONGRESS KONGRES

30-31 Aug. 1997

CONTENTS

INHOUDSOPGAWE

MESSAGE OF WELCOME

PROF ULRICH MENNEN
PRESIDENT

THE SOUTH AFRICAN SOCIETY FOR SURGERY OF THE HAND

It's Congress time again!!

Someone once said: "the surest thing in life is change". Some changes are good, some bad. A disastrous example is that we have been led to believe that medical cost containment could be achieved by "Managed Health Care". It has failed dismally in the U.S.A., and still, our own "trade union", M.A.S.A., keeps on justifying this big medical lie of 1996, while some big insurance companies rake in unprecedented profits to the detriment of patients and service providers.

Changes also occur in other parts of the world. Curtailment of private practice in France has forced our 1997 visiting lecturer, Guy Foucher, to cancel his trip in order to allow him to deal with the medical political problems at home. We understand!

Gracefully and with much appreciation has our 1998 visiting lecturer, Ulrich Lanz agreed to come earlier. We are all looking forward to learn from his vast experience and insight.

May this 1997 Cape Town Congress and Instructional Course change us positively and enrich us all to be better service providers.

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1969 - 1971	*I. Kaplan*
1971 - 1973	*A.C. Boonzaier*
1973 - 1975	*M. Singer*
1975 - 1977	*J.H. Youngleson*
1977 - 1979	*T.L. Sarkin*
1979 - 1981	*C.E. Bloch*
1981 - 1983	*S.L. Biddulph*
1983 - 1985	*W.M.M. Morris*
1985 - 1987	*L.K. Pretorius*
1987 - 1989	*K.S. Naidoo*
1989 - 1991	*S.L. Biddulph*
1991 - April 1992	*B.J. Van R Zeeman*
April 1992 - 1993	*S.L. Biddulph*
1993 - 1995	*J.H. Fleming*

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CONGRESS ORGANISERS	*L.T. de Jager*
KONGRESORGANISEERDERS	*D. Rodseth*
1997	*Hendrika van der Merwe*

ANNUAL GENERAL MEETING
ALGEMENE JAARVERGADERING

SATURDAY 30 AUGUST 1997
16:00 - 17:00
(Members only/Lede alleenlik)
Venue/Plek
Auditorium
Arthur's Seat Hotal, Sea Point

1
Welcome address by the President
Verwelkoming deur die President

2
Apologies & Proxies
Verskonings & Volmagte

3
Minutes of the previous Annual General Meeting
Notule van die vorige Algemene Jaarvergadering

4
Matters arising from the minutes
Sake wat uit die notule voortspruit

5
President's report
President se verslag

6
Honorary Secretary/Treasurer's report
Ere-Sekretaris/Tesourier se verslag

7
Proposed increase in Entrance Fee and Annual Subscription
Voorgestelde verhoging in Intreefooi en Jaargeld

8
Announcement of New Executive Committee
Aankondiging van Nuwe Uitvoerende Bestuur

9
Membership/Lidmaatskap

10
General/Algemeen

11
Next Annual General Meeting
Volgende Algemene Jaarvergadering

SOCIAL EVENT
SOSIALE BYEENKOMS

30 AUGUST 1997

19:00

DINNER / ETE

(delegates and partners/
kongresgangers en metgeselle)

Arthur's Seat Hotel, Sea Point

Admission to this function by invitation only

NEXT CONGRESS
VOLGENDE KONGRES

5 - 6 September 1998
BLOEMFONTEIN

GENERAL INFORMATION
ALGEMENE INLIGTING

Congress venue	*Agulhas 1* *2nd Floor* *Arthur's Seat Hotel* *Sea Point*
Cell Phones / Bleepers	*All cell phones and bleepers should be turned off during conference sessions*
Information Desk	*Please feel free to visit the Information Desk should you require any assistance*
Smoking	*No smoking will be permitted during the conference*
Teas and Lunches	*Will be served in the trade exhibition area*
Parking	*Ample parking at the venue*

Please wear your name tag at all times

SCIENTIFIC PROGRAMME

CONGRESS
30 AUGUST 1997

07:45 - 08:15 Registration: Arthur's Seat Hotel, Sea Point

08:15 - 08:20 Welcome and announcements *Dr. Wikus de Jager*

SESSION ONE

CHAIRMAN: DR. W. DE JAGER

08:20 - 08:30 Preliminary Report on Perceptual Abilities in Obstetric Birth Palsy
Prof. K.S. Naidoo, O. Nukana, A. Ramlaul, Durban

08:30 - 08:35 Discussion

08:35 - 08:45 Results of Brachial Plexus Reconstruction with and without Extraplexal Neurotization
Dr. Jose J. Monsivais, Mexico

08:45 - 08:50 Discussion

08:50 - 09:00 Toe to Hand Transfer
Dr. T.H.J. Venter, East London

09:00 - 09:05 Discussion

09:05 - 09:25 Free Gracilis Muscle Transplantation
Prof. U. Lanz, Germany

09:25 - 09:30 Discussion

09:30 - 09:40 Resection Arthroplasty of the CMC Joint with Tendon Interposition *Dr. T.L.B. le Roux, Pretoria*

09:40 - 09:45 Discussion

09:45 - 09:55 Metacarpal Reconstruction - Free Fibular Metacarpal(s) Flap *Dr. R. Schröder, Prof. U. Mennen, Dr. J. van der Westhuizen, Medunsa*

09:55 - 10:00 Discussion

10:00 - 10:30 TEA

SESSION TWO

CHAIRMAN: PROF. U. MENNEN

10:30 - 10:40	Dynamic Scapholunate Instability: The Short Term Results of Treatment with Dorsal Capsulodesis (Blatt Procedure) *Drs. M. Hirner, D. van der Jagt, S. Biddulph, Johannesburg*
10:40 - 10:45	Discussion
10:45 - 10:55	Scapholunate Dynamic Instability: A Review of Untreated Patients *Mr. W. Stuart, Mr. J. Stanley, Mr. I. Trail, Johannesburg*
10:55 - 11:00	Discussion
11:00 - 11:20	Ulna Impaction Syndrome *Prof. U. Lanz, Germany*
11:20 - 11:25	Discussion
11:25 - 11:35	Conservative Treatment of Proximal Phalanx Fractures of the Hand *Drs. T.L.B. le Roux, S. Jaffe, Pretoria*
11:35 - 11:40	Discussion
11:40 - 11:50	External Fixator for the Hand - A Cheap, Effective Method *Drs. S. McCulley, C Hastings, Cape Town*
11:50 - 11:55	Discussion
11:55 - 12:05	PIP Joint Injuries - Are they serious? *Ms. C. van Velze, Pretoria*
12:05 - 12:10	Discussion
12:10 - 12:20	Observations on the Comparison of Tendon Transfers for Radial Palsy *Prof. K.S. Naidoo, Drs. A. Ramlaul, R. Rajoo, Durban*
12:20 - 12:25	Discussion
12:25 - 13:30	LUNCH

SESSION THREE

CHAIRMAN: DR. J. VAN WINGERDEN

13:30 - 13:40	Dupuytren's Disease: McCash Technique and Regional Fasciectomy *Dr. T.H.J. Venter, East London*
13:40 - 13:45	Discussion
13:45 - 13:55	Dupuytren's Releases at Groote Schuur Hospital 1990 - 1996 *Dr. R.N. Dunn, Cape Town*
13:55 - 14:00	Discussion
14:00 - 14:10	A Study to determine the Effect of Pulsed Shortwave Therapy on the Healing of Open Wounds to the Hand *Ms. N. Naidoo, Prof. A. Madaree, Durban*
14:10 - 14:15	Discussion
14:15 - 14:25	Flexor Pollicis Longus - The forgotton flexor? *Drs. A.N.M. Fleming, D.A. Hudson, H. Buchanan, Cape Town*
14:25 - 14:30	Discussion
14:30 - 14:40	Evaluation of High Frequency Ultrasound as a Diagnostic Aid for Post-operative Complications following Flexor Tendon Repair *Drs. F. Ho, M. Carides, Johannesburg*
14:40 - 14:45	Discussion
14:45 - 14:55	The Results of Tenolysis in the Upper Limb *Mr. E. Bowen-Jones, Durban*
14:55 - 15:00	Discussion
15:00 - 15:30	TEA

SESSION FOUR

CHAIRMAN: DR. T.L.B. LE ROUX

15:30 - 15:40	Use of Botulinum Toxin in Painful Syndromes *Dr Jose J. Monsivais, Diane B. Monsivais, Mexico*
15:40 - 15:45	Discussion
15:45 - 15:55	Closure by President
16:00 - 17:00	Annual General Meeting
19:00	Dinner

INSTRUCTIONAL COURSE
SUNDAY 31 AUGUST 1997

08:00 - 08:30 Registration, Arthur's Seat Hotel, Sea Point

CHAIRMAN: PROF. K.S. NAIDOO

08:30 - 09:00 STT Fusion for SL Dissociation in Kienböck's Disease *Prof. U. Lanz*

09:00 - 09:15 Discussion

09:15 - 09:45 Midcarpal Fusion for Advanced Carpal Collaps (SLAC and SNAC Wrist) *Prof. U. Lanz*

09:45 - 10:00 Discussion

10:00 - 10:30 TEA

CHAIRMAN: MR. E. BOWEN-JONES

10:30 - 11.00 Congenital radial deficiency - management of absence or hypoplasia of the radius and thumb *Prof. M. Tonkin, Australia*

11:00 - 11:15 Discussion

11:15 - 11:45 Complex Syndactyly of the radial side of the hand *Prof. U. Lanz*

11:45 - 12:00 Discussion

12:00 - 12:15 Report Back by Travelling Fellow *Mr. W. Stuart*

12:15 - 13:00 A.C. Boonzaaier Lecture: In appreciation of the Hand *Prof. U. Mennen*

13:00 - 13:05 Induction of new President

13:05 - 14:00 LUNCH

CHAIRMAN: MR. J. FLEMING

14:00 - 14:30 Anatomical Variations of the Median Nerve in the Carpal Tunnel *Prof. U. Lanz*

14:30 - 14:45 Discussion

14:45 - 15:15 Free Great Toe Pulp Flap Transplantation *Prof. U. Lanz*

15:15 - 15:30 Discussion

15:30 - 16:00 TEA

CHAIRMAN: DR. D. RODSETH

16:00 - 16:30 Correction Osteotomy of Malunited Distal Radius Fractures *Prof. U. Lanz*

16:30 - 16:45 Discussion

16:45 Closure by the President

SUMMARIES OF PAPERS

1. *PRELIMINARY REPORT ON PERCEPTUAL ABILITIES IN OBSTETRIC BIRTH PALSY*

K.S. Naidoo, O. Nukanna, A. Ramlaul

The purpose of this paper is to submit a preliminary report on an observation that has not been previously associated with Obstetric Birth Palsy, i.e. that a certain number of children with birth palsy present with problems relating to performance at home and at school. Objective tests have been carried out on children between the ages of 4 - 17 to assess the extent and severity of this problem. Emphasis has been directed towards the visual perceptual skills.

2. *RESULTS OF BRACHIAL PLEXUS RECONSTRUCTION WITH AND WITHOUT EXTRAPLEXAL NEUROTIZATION*

Dr. Jose, J. Monsivais

INTRODUCTION:

Controversy continues to exist about whether reconstruction of obstetrical plexopathies is necessary, and whether intercostal neurotization is a reliable procedure. This paper will evaluate the outcomes on 22 patients with obstetrical plexopathies who have undergone reconstructive procedures.

MATERIALS AND METHODS:

Since 1983, 340 brachial plexus operations have been performed. From this group, 32 patients are in the pediatric category, and of those 28 are obstetrical. All 28 underwent exploration of the brachial plexus with intraoperative SSEPs and reconstruction of the roots available (C5, C6, or C7) with sural nerve intrafascicular nerve grafting. Long term results are available on 22. When the evoked potentials gave a questionable or negative result in any of the roots, neurotization was used. Of that group, 12 intercostal neurotizations have been performed in the pediatric group, and of those 9 are obstetrical. Six patients have undergone spinal accessory nerve transfer to the suprascapular nerve. Average follow-up is 3.9 years.

RESULTS

All patients are in the Mallet functional IV category at over 3 years post-op. Intercostal neurotization to the musculocutaneous nerve can yield comparable results to C5/6 neurotization when not enough fibers are available from those roots. Spinal accessory to suprascapular can also yield a satisfactory result when C5 is not available (or only a very few fibers are available).

DISCUSSION:

Reconstructive microsurgery provides safe and improved outcomes over conservative treatment of brachial plexus.

3. *TOE TO HAND TRANSFER*

Dr. T.H.J. Venter

68 year old male patient presented with a circular saw injury of the right hand. There was total loss of the right thumb through the base of the metacarpal and through the MP joint of the index finger. Soft tissue debridement was done. Repair, including skin grafts as well as plating of fractures of the index finger metacarpal, was done 48 hours later.

Toe to thumb transfer followed three months later. At surgery it was found that there was no dominant arterial supply to the big toe distal to the MP joint where the dorsalis pedis artery enters the first web space. There were no identifiable arteries present on either the plantar or dorsal side. Micro-surgical anastomosis was done between the palmar radial artery to the dorsal vein of the toe as well as the dorsal branch of the radial artery to a second dorsal vein of the toe. Two veins were anastomosed end to end. The toe stayed white after the anastomosis despite good pulsatous into the toe but only for a short distance. The blood vessels (artery to vein anastomoses) were dissected out distally and several venous valves excised and the vessels re-anastomosed. The toe stayed white 2 hours post-opereratively and then slowly turned pink. The toe survived well on 6 months post-operative assessment with good function and return of sensation.

A similar case was described in PRS of April 1996. In this case, however, the valves in the veins (arterial/venous anatomoses) were not excised and the authors reported partial loss of the skin and pseudoarthoses.

This case study demonstrated that the toe can survive solely on a venous system from arterial supply should one find intra-cperatively that there is no dominant arterial supply to the toe or in cases of arterial damage or irreversable arterial spasm.

4. FREE GRACILIS MUSCLE TRANSPLANTATION

Prof. U. Lanz

In cases of permanent loss of musculature after trauma or Volkmann's ischemic contracture musculature is lost permanently tendon transposisition from the uninvolved compartment is considered to be the most reliable and also the fastest therapy.

In cases of Volkmann's ischemic contracture typically not only the flexor musculature of the forearm is involved, but also the major nerves to the hand, the median and the ulnar nerve. Primary attention has to be put upon the function of these nerves in order to provide sensation and motor function of the intrinsic musculature.

If more than one muscle compartment has lost musculature, free muscle transplantation with microvascular and microneural hook up is the only way to restore useful motion. We prefer to use the gracilis muscle of the leg because of it's constant anatomy and the neglegable function loss in the donor area, despite the fact that this muscle does not give very good power. Wrist stability is essential for function of the hand. If most of the wrist motors are lost, wrist arthrodesis is an important additional procedure.

5. RESECTION ARTHROPLASTY OF THE CMC JOINT WITH TENDON INTERPOSITION

Dr. T.L.B. le Roux

INTRODUCTION

Many different methods of treating CMC arthritis are available.

METHODS

We looked at 30 patients who had resection arthroplasty with FCR reconstruction and interposition and we interview them for satisfaction after this procedure which included relief of pain and increase in gripstrength.

RESULTS

We have found that the majority were satisfied (± 90%) and that in few still had problems with pain and also deformity at the MP joint and with carpal tunnel signs.

CONCLUSION

Although many different techniques are available for this condition we think this is still a good procedure especially for peritrapezium arthritis.

6. METACARPAL RECONSTRUCTION - FREE FIBULAR METACARPAL(S) FLAP

R.A. Schröder, U. Mennen, J. van der Westhuizen

AIMS OF STUDY

In a crime riddled society such as ours, bullet, knife, panga or axe wounds and crush injuries are an ever increasing phenomenon. The resultant wounds with loss of metacarpal support / stability may lead to severely debilitated and inadequate hand function. Management by early surgical debridement, immediate or delayed bone grafting and ray amputations have been implemented with varying successes. Our research was aimed at assessing whether a free fibular graft would be a suitable alternative for reconstruction.

MATERIAL AND METHODS

15 Fresh cadavers of both sexes were used with ages ranging from 19 to 61 years. The metacarpals and fibulae have been analysed assessing the average length, diameter, intermetacarpal distance and cortical thickness.

RESULTS

The free vascularized fibulae graft, in length and diameter provides a reasonable alternative for metacarpal reconstruction. Additional benefits include the incorporation of the fasciocutaneous skin paddle for soft tissue coverage.

CONCLUSION

Loss of metacarpal form and function has a significant effect on overall hand function with resultant morbidity and loss of economical viability. We would like to present the fabricated free fibular metacarpal(s) flap as an alternative approach to this significant problem.

7. DYNAMIC SCAPHOLUNATE INSTABILITY: THE SHORT TERM RESULTS OF TREATMENT WITH DORSAL CAPSULODESIS (BLATT PROCEDURE)

M. Hirner, D. van der Jagt, S. Biddulph

Nine patients underwent dorsal capsulodesis (Blatt procedure) for dynamic scapholunate instability. Patient selection was based on a combination of clinical symptoms and classical radiological signs of scapholunate instability. Following surgery all the patients had a cessation in pain and improved grip strength. There was, however, up to 20 degrees loss in palmar flexion. Post-operative radiographs showed partial correction of the scaphoid rotation, but the scapholunate gap was still evident. Our results show that doral capsulodesis provides good relief from the symptoms of dynamic scapholunate instability, despite incomplete correction of radiographic signs.

8. SCAPHO-LUNATE DYNAMIC INSTABILITY: A REVIEW OF UNTREATED PATIENTS

Mr. W. Stuart, Mr. J. Stanley and Mr. I. Trail

The impairment and disability associated with dynamic instability of the wrist is ill-defined. A sequence of 135 arthroscopies performed by one surgeon were analysed and 25 patients were identified as fulfilling the criteria of dynamic instability of the carpus at the scapholunate interval.

Twenty-one patients had no specific treatment for instability other than investigation by arthoscopy. Two had established degenerative changes within the wrist leaving 19 patients who had been defined as having dynamic instability of the wrist, but for whom no specific treatment was either requested or offered. These patients were examined and interviewed in order to identify the effects of prolonged dynamic instability of the wrist upon their function.

The effects upon employment, day to day living, grip strength and range of motion are discussed. The study shows that in some patients, dynamic instability can bo tolerated in day to day living. For others, the level of symptomatology has significantly affected their activities of daily living, job, hobbies and pastimes.

9. ULNA IMPACTION SYNDROME

Prof U. Lanz

Ulna Impaction Syndrome consists of overload of the ulnocarpal compartment either acute or chronic. To a varying degree the ulna head, the distal radioulnar joint, the ulnocarpal complex (TFCC) and the ulnar portion of the proximal carpal row may be involved.

Positive variance of the ulna or shortening and angulation of the distal radius after fracture may be the cause of the ulnar overload. Ulna recession or correction osteotomy of the radius are the adequate treatment in these cases. In our series 16 of 19 patients had a good or very good result following the ulna recession osteotomy. Pain reduction of 72% on a VAS was the most significant improvement. In a ulna neutral or mild plus-situation arthroscopy is of great diagnostiv value. Different lesions of the TFCC and the ulnar half of the proximal carpal row can be found depending upon time and kind of injury. In our series of 100 cases of arthroscopic debridement two thirds had good pain relieve. In the remaining one third ulna recession further improved the results.

As soon as of the DRUJ shows arthrotic changes only salvage procedures are presently available: The ulna head hemiresection tendon interposition arthroplasty (Bowers) showed a high percentage of pain relieve with improved range or forearm rotation. An alternative is the fusion of the DRUJ combined with segmental ulna resection (Kapandji). The drawback of both procedures is a decrease of grip strength. Possibly the ulna head prosthesis, developed by Herbert and van Schoonhoven will be a solution of this problem in the future.

10. CONSERVATIVE TREATMENT OF PROXIMAL PHALANX FRACTURES OF THE HAND

Dr. T.L.B. le Roux and Dr. S. Jaffe

INTRODUCTION

Surgical treatment of proximal phalanx fracture has always been a problem, especially lost of function and range or motion.

METHODS

We treated 25 patients with a Burkhalter POP and/or thermoplastic splints with active and passive hand therapy.

RESULTS AND CONCLUSION

We looked at the ROM and the function (hand evaluation tests) and found that this treatment is effective and beneficial to the functional outcome provided that this form of immobilization was correctly applied and the patients were followed up regularly and properly informed.

11. EXTERNAL FIXATOR FOR THE HAND: A CHEAP, EFFECTIVE METHOD

Drs. S. McCulley, C. Hastings

The management of grossly comminuted fractures in the hand can be difficult. The use of an external fixator to maintain length and fracture stability has an obvious place. However, equipment available is both costly and often difficult to apply.

We have used the plastic sleeve to an intravenous canula and k-wires to make an effective external fixator. It is very quick to apply, cheap and readily available in all theatres. Bone length is well maintained and fixator stability excellent, especially when used on a pharynx. Good fracture union is observed.

Our method of application and preliminary results with this new method are presented.

12. PIP JOINT INJURIES - ARE THEY SERIOUS?

Corrianne van Velze

Injuries to the proximal interphalangeal (PIP) joints of the fingers and their surrounding soft sissue are among the most common hand injuries. PIP joints can be injured in a variety of manners, including sport and domestic incidents, and are frequently seen by general practitioners. It is most unfortunate that trauma to the small joints of the hand is ofted treated as a trivial injury. Many patients are sent away with nothing more than a "buddy splint" and are told to move the finger and disregard their pain. Too often the extent of the injury is not appreciated and consequently the finger is not adequately treated.

Pip joint injuries can be divided into the following six categories:

1. Collateral ligament injuries
2. Dorsal dislocations
3. Volar dislocations
4. Articular fractures
5. Boutonniere deformities
6. Volar plate injuries

Management of these injuries will be briefly discussed under each category, bearing in mind that the treatment of PIP joint injuries requires a fine balance between immobilisation to protect the joint and to allow healing and early motion to prevent adhesion of the capsule and ligaments.

13. OBSERVATIONS ON THE COMPARISON OF TENDON TRANSFERS FOR RADIAL PALSY

K.S. Naidoo, A. Ramlaul, R. Rajoo

This paper reports observations on tendon transfers for Radial Palsy. Two groups of patients were compared - one group in which Flexor Carpi Radialis was used to restore finger extension and in the other Flexor Carpi Ulnaris was used. Clinical and objective tests were used to assess post operative performance.

14. DUPUYTREN'S DISEASE: McCASH TECHNIQUE AND REGIONAL FASCIECTOMY

Dr. T.H.J. Venter

INTRODUCTION

A prospective study was done on 39 patients with Dupuytren's disease. The aim was to assess the long term results of the McCash skin incision technique and regional fasciectomy.

MATERIALS AND METHODS

39 patients were assessed; 26 males and 13 females. Ages of the patients: 41 to 76 years. 29 patients were followed up for 9 months to 5 years. Indications for surgery: i) painful nodule - 19 patients, ii) flexion contracture of MP joint - 13 and iii) flexion contracture of the PIP joint - 16.

Technique: McCash skin incision using multiple transverse incisions. Regional fasciectomy with radical excision of all the diseases tissue as identified by a 3.5 loupe magnification. Skin was sutured only if it could be done with no tension with the fingers in extension. If not, the wounds were left open. The hand was dressed with a firm bandage and elevated.

RESULTS

Complications: i) none - 26 patients, ii) nerve injury - 2 patients; iii) haematoma - 1 patient, iv) skin necrosis - 0 patients, v) painful scar; keloid 1 patient, vi) sensitive palm - 6 patients, vii) Sudeck's atrophy - 0 patients.

Recurrence in the same finger in the group of long term follow up (more than 9 months - 29 patients) - 4.

Residual contracture more than 9 months after the injury (29 patients) 3 with the PIP joint -10 degrees, -15 degrees and -15 degrees respectively.

DISCUSSION

Many different skin incisions are advocated for Dupuytren's with the biggest problems haematoma formation or skin necrosis especially at the tips of the Z-plasty flaps. There is also still controversy regarding the extent of the fasciectomy. This study

has shown that there is a very low incidence of haematoma formation, no skin necrosis and a low recurrence rate with the McCash skin incision technique and regional fasciectomy.

CONCLUSION

McCash technique with radical regional fasciectomy is a safe technique with good long term results.

15. DUPUYTREN'S RELEASES AT GROOTE SCHUUR HOSPITAL 1990 - 1996

Dr. R.N. Dunn

INTRODUCTION

Dupuytren's disease is a benign fibroproliferative disorder of the palmar fascia that may result in disabling finger contractures. Recognition of this disease dates back to the 12th century, but a basic understanding awaited Guillaume Dupuytren's description in 1831. Despite recent advances in our knowledge of the disease, current treatment techniques remain crude and recurrence rates high.

METHOD

The patients that came to surgery between 1990 and 1996 for this condition were reviewed. In addition, these patients were followed up and re-examined.

RESULTS

During this period 72 Dupuytren release operations were performed on 55 patients. There were 46 males and 9 females. 6 patients suffered from diabetes, 8 a positive family history, 5 had knuckle pads and 7 plantar involvement. The average age of presentation was 60.9 years, and onset of 55 in males and 58 in females. The presenting limb was left in 18, right in 25 and 12 bilateral. The commonest presenting digit was the little. There was contra-lateral involvement in 37 patients at time of presentation. Limited fasciectomies were performed in 43 and segmental aponeurectomies in 22, with joint releases in 4. The average pre-operative deformities were 35° at MP and 52° at PIPJ. Correction of 34° was achieved at MP level and 28° at PIPJ. 30 cases were re-examined with an average period since surgery of 38 months. A correction of 23° at

MP and 14° at PIPJ was maintained. They had an average residual deformity of 8.2° at MP and 30° at PIPJ. There was no statistically significant difference between results of segmental versus limited fasciectomy, although a trend towards fasciectomy yielding better PIPJ correction. There were 3 digital artery injuries, 3 digital nerve injuries and 2 amputations.

CONCLUSIONS

Segmental aponeurectomy ptovides good MP correction, but due to the higher incidence of digital artery and nerve injuries and trend of improved PIPJ correction with fasciectomy, the latter is recommended for PIPJ release. Despite good initial correction, much less was maintained. More attention should be paid to post-operative splintage in an attempt to prevent this loss. Despite surgery, loss of flexion is not a risk.

16. A STUDY TO DETERMINE THE EFFECT OF PULSED SHORTWAVE THERAPY ON THE HEALING OF OPEN WOUNDS TO THE HAND

Nirmala Naidoo and Anil Madaree

AIM OF THE STUDY

To establish the effectiveness of pulsed shortwave therapy in the treatment of open wounds to the hand. Secondly, to determine the cost effectiveness, length of treatment time and rate of rehabilitation of the hand with regards to return to work.

METHOD

25 patients with open wounds in each of the five zones of the hand were included in the study. Treatment included, exposure of the wound, saline soak for 10 - 15 minutes with active exercise. A neutral dressing of Jelonet and gauze was applied either daily or three times, weekly. Patients were given pulsed shortwave therapy for 10 - 20 minutes at each treatment session and were assessed once a week for measurement of the wound healing and pain.

RESULTS

Patients with acute open wounds to zones I-V of the hand showed improvement in wound healing and pain when treated with pulsed shortwave diathermy. Exuberant granulation and epithelialisation was demonstrated. Scar tissue was stable, with minimum pain.

CONCLUSION

The treatment of acute open wounds to the hand with pulsed shortwave therapy yields significant wound healing and improvement of pain, and it facilitates earlier return to daily functions and employment.

17. FLEXOR POLLICIS LONGUS - THE FORGOTTEN FLEXOR?

A.N.M. Fleming, D.A. Hudson, H. Buchanan

A retrospective analysis of all Flexor Pollicis Longus injuries treated at Groote Schuur Hospital over a 4 year period (1993 - 1996) was performed.

Records of 83 patients were studied, of whom 34 (41%) were available for review after a mean interval of 18.3 months.

Factors potentially influencing outcome, including mechanism and zone of injury, hand dominance, presence of associated injuries and method of immobilisation were noted. At follow-up, active range of movement of the thumb inter-phalangeal joint was compared with the non-injured side, as were key-pinch and power-grip measurements.

All had been subjected to a standardised method of repair done by Registrars with between 0 - 6 months of training in a dedicated Hand Unit. All repairs were immobilised with a dorsal Plaster-of-Paris slab and 20% had Kleinert passive flexion / active extension traction. The results showed that most injuries were in Zone II (43%). 87% fell into a good / excellent category according to Buck-Gramcko's criteria. Gript strenth was, however, only 66% of the non-injured side and key-pinch 74%. There were no ruptured tendons in the post-operative phase.

Zone V injuries, especially if the median nerve and long flexors were involved, generally did poorly with regard to strengths, although ranges of movements were comparable to other zones.

Use of Kleinert traction, wounding agent, hand dominance and age of patient were not significant factors in outcome.

We suggest that despite our favourable mechanical results, function in those patients available for review is not ideal. We examine possible causes of this and suggest a modified scoring system in an attempt to better define this lesion.

18. EVALUATION OF HIGH FREQUENCY ULTRASOUND AS A DIAGNOSTIC AID FOR POSTOPERATIVE COMPLI-CATIONS FOLLOWING FLEXOR TENDON REPAIR

F. Ho, M. Carides

Difficulty is often experienced in differentiating ruptures from adhesions in the early postop period following flexor tendon repair. The aim of the study is to evaluate ultrasonography as a diagnostic tool in differentiating between tendon rupture and tendon adhesions after flexor tendon repairs.

All repairs were performed with 3.0 ethibond using a modified Kessler technique. All patients were mobilized within 48 hours postoperatively in either dynamic traction or free mobilization in a cage.

There are 15 patients in a prospective study to date who presented with complications of stiffness and loss of interphalangeal flexion within 2 months after repair. These patients underwent ultrasonography of hand before explorative surgery. Another 25 patients will be included in the study over a 3 month period. A high frequency probe was used to scan the tendon in transverse and sagital planes. Either tendon rupture or adhesions was diagnosed and this was confirmed at surgery. Adhesions was confirmed in 6 out of 8, and ruptured tendon in 5 out of 7.

We conclude that ultrasonography is a valuable diagnostic aid in distinguishing ruptures from adhesions in the early postoperative period.

19. THE RESULTS OF TENOLYSIS IN THE UPPER LIMB

Edward Bowen Jones, M. Pillay

Tenolysis, the procedure of freeing tendons following trauma or surgical repair, is only required in a small proportion of patients in whom movement has not improved following physiotherapy.

Sixteen cases of tenolysis over the last 5 years have been reviewed. Seven were to finger flexors, 4 to Flexor Pollicis Longus and 4 to extensors. Nine had been primarily operated on by one of the authors and 7 referred for later reconstruction by other surgeons. The time period between initial injury and tenolysis varied between 0 months and 2 years. Eight patients had been injured on duty. Results showed a good improvement in 7 cases, slight improvement in 5 cases and no improvement in 4 cases. The best results were with Flexor Pollicis Longus adhesions and finger flexors in Zones 3 and 5 and in those cases that had waited over a year before tenolyses. Poor results were associated with multiple tenolysis, reimplantations and extensor tendons and in those whose compliance with rehabilitation was poor. Tenolysis is a worthwhile procedure in carefully selected patients in single flexor tendon releases, particularly of the thumb.

20. USE OF BOTULINUM TOXIN IN PAINFUL SYNDROMES

Jose J. Monsivais and Diane B. Monsivais

PURPOSE

To study the efficacy of botulinum toxin in a group of patients with cervical dynamic compression of the brachial plexus.

MATERIALS AND METHODS

A total of 68 patients with the diagnosis of cervical dynamic compression of the brachial plexus and chronic pain syndrome were included in the study. The total number of extremities evaluated was 77. The patients were divided into three groups. Group 1 was treated with botulinum toxin only (17 patients, 20 extremities). Group 2 was treated with botulinum toxin and surgical intervention (29 patients, 32 extremities), and Group 3 was treated with surgical intervention only (22 patients, 25 extremities). The following parameters were assessed pre- and post-treatment - pain levels, pain related depression levels, sensory battery, and grip and pinch strengths.

RESULTS

Follow-up time for Group 1 was 5 months, for Group 2 was 15 months, and for Group 3 was 29 months. Statistical analysis was done to determine significant differences between treatments. Within subject differences were found to be consistently significant for pain and pain related depression variables. All other variable did not show significant within subject differences.

CONCLUSIONS

Use of botulinum toxin as part of a chronic pain management program can be effective adjunct in treatment.

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