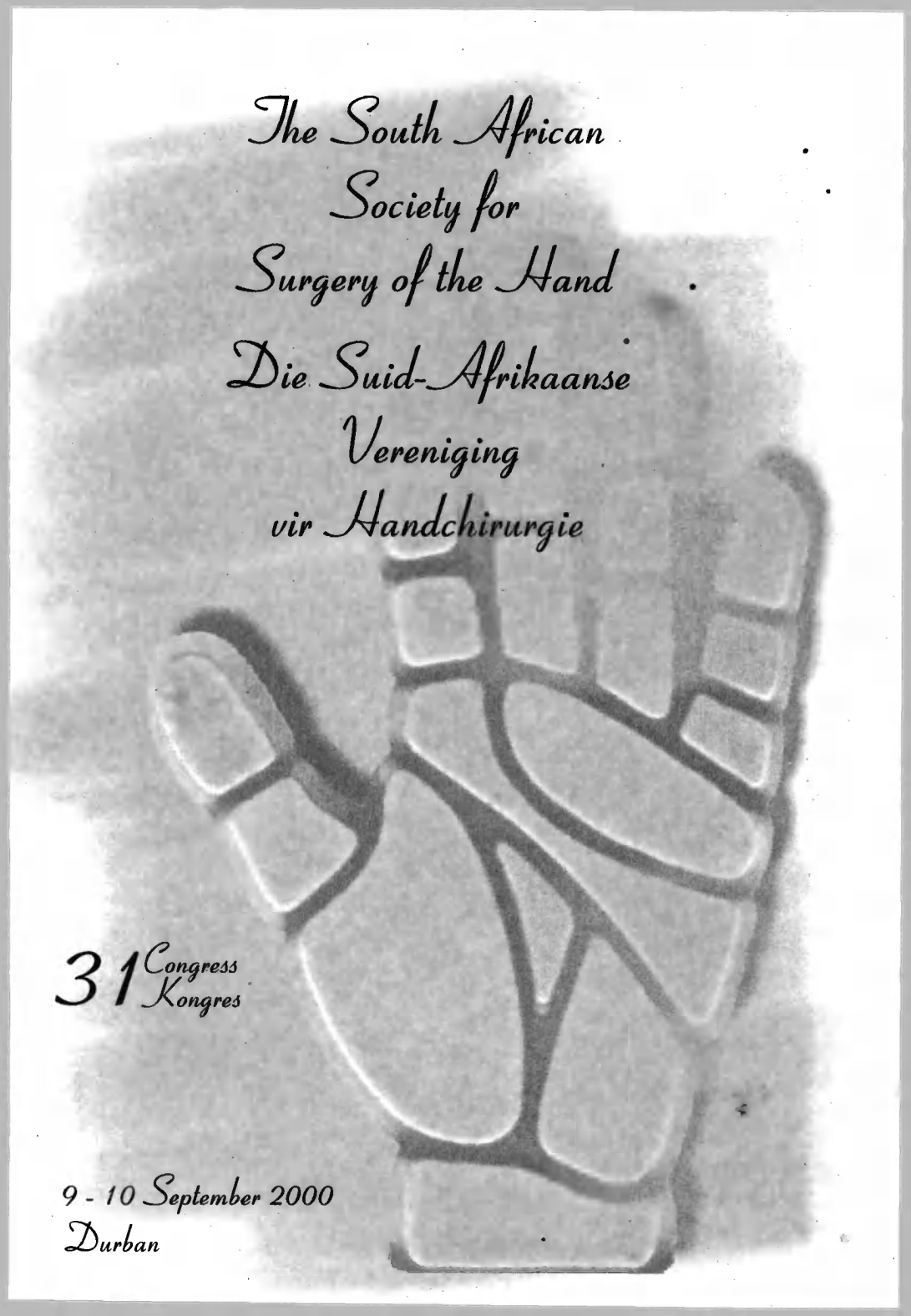
The South African Society for Surgery of the Hand

Die Suid-Afrikaanse Vereniging vir Handchirurgie



31 Congress / Kongres

9 - 10 September 2000

Durban

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INHOUDSOPGAWE

MESSAGES OF WELCOME

DR LT (Wikus) DE JAGER
PRESIDENT
THE SOUTH AFRICAN SOCIETY FOR SURGERY OF THE HAND

Dear Friends

Welcome to Durban for the 31st Congress of The South African Society for Surgery of the Hand

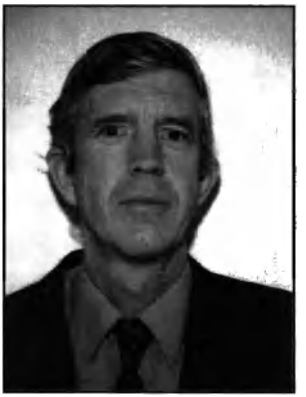
A special welcome to our guest lecturer Professor Wayne Morrison from Melbourne Australia. Professor Morrison is well known as the father of the wrap around flap, but he is an expert hand- and microsurgeon with a wide range of experience and publications.

I would like to thank Hendrika van der Merwe, Michael Carides and Edward Bowen-Jones for organising the congress.

Let us learn how to improve the healing of the hands that have to build South Africa.

Enjoy the congress.

DR EDWARD BOWEN-JONES
CONGRESS CHAIRMAN



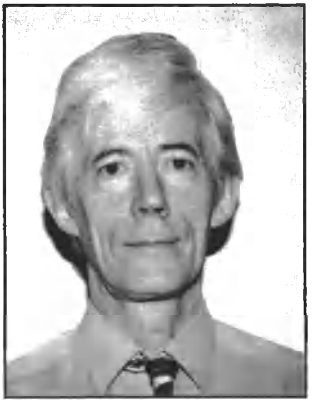
ıe Congress Organising Comm ttee extends a warm welcome to Durban › all the delegates.

ɛ can promise you an exciting programme thanks to the contributions of › many of you.

special welcome to Professor Wayne Morrison, our guest from ·urne, Australia, who last visited us in 1989.

ɣ only regret is that I have been called away for the duration of the ›ngress. However, I am confident that you will all be well entertained ıd intellectually stimulated in our beautiful and balmy city. Enjoy your ɛekend in Durbs!

INTERNATIONAL VISITOR



Professor Wayne Morrison

PAST PRESIDENTS/VORIGE PRESIDENTE

1969 - 1971	I Kaplan
1971 - 1973	AC Boonzaier
1973 - 1975	M Singer
1975 - 1977	JH Youngleson
1977 - 1979	TL Sarkin
1979 - 1981	CE Bloch
1981 - 1983	SL Biddulph
1983 - 1985	WMM Morris
1985 - 1987	LK Pretorius
1987 - 1989	KS Naidoo
1989 - 1991	SL Biddulph
1991 - April 1992	BJ van R Zeeman
April 1992 - 1993	SL Biddulph
1993 - 1995	JH Fleming
1995 - 1997	U Mennen
1997 - 1999	E Bowen-Jones

OFFICE BEARERS/AMPSDRAERS

President	LT de Jager
Immediate Past President/ Pas uitgetrede President	E Bowen-Jones
Honorary Secretary/Treasurer	M Carides
Members/Lede	T le Roux U Mennen J van Wingerden
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CONGRESS ORGANISERS / KONGRESORGANISEERDERS	Edward Bowen-Jones, Michael Carides, Hendrika van der Merwe

ANNUAL GENERAL MEETING
ALGEMENE JAARVERGADERING

SATURDAY 09 SEPTEMBER 2000

15:45 - 17:00

(Members only/Lede alleenlik)

The Hilton Hotel, Durban

1

Welcome Address by the President
Verwelkoming deur die President

2

Apologies and Proxies
Verskonings en 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 President Elect
Aankondiging van Aangewese President

9

Membership / Lidmaatskap

10

Proposed Changes to Constitution
Voorgestelde Wysigings aan Grondwet

11

General / Algemeen

12

Next Annual General Meeting
Volgende Algemene Jaarvergadering

SOCIAL EVENT
SOSIALE BYEENKOMS

09 SEPTEMBER 2000
18:30: Bus Departs from Hotel to Harbour
19:00: Harbour Cruise and Dinner

FUTURE COURSES AND CONGRESSES
TOEKOMSTIGE KURSUSSE EN KONGRESSE

Refresher Course on Infection, Tumours, Rehabilitation and Amputations
March 4 - 5 Maart 2001
Kopanong Hotel and Conference Centre
Kopanong Country Estate, Benoni

32nd Annual Congress and Instructional Course
1 - 2 September 2001
Pilanesberg Game Park

GENERAL INFORMATION
ALGEMENE INLIGTING

Congress Venue	The Hilton Durban
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
SATURDAY 09 SEPTEMBER 2000

07:30-08:00	Registration	
08:00-08:10	Welcome and Introduction of Prof W Morrison by Dr LT de Jager, President: SASSH	
SESSION 1	**CHAIRMAN: DR LT DE JAGER**	
08:00-08:20	Dupuytren's Disease in Black Patients	Drs S Simango, M Daya, Proff A Madaree, KS Naidoo
08:20-08:25	Discussion	
08:25-08:35	Dupuytren's Disease and Diabetes	Dr A Barrow, Prof S Biddulph
08:35-08:40	Discussion	
08:40-08:50	Two Stage Flexor Tendon Grafts - Is it a Viable Option?	Drs M Solomons, R Endenburg
08:50-08:55	Discussion	
08:55-09:05	Management of PIP Flexion Contractures using Different Splinting Methods	Ms L Pringle
09:05-09:10	Discussion	
09:10-09:30	Finger Tip Injury and Repair	Prof W Morrison
09:30-09:40	Discussion	
09:40-09:55	End-to-Side Nerve Suture for Deltoid Re-innervation	Prof U Mennen
09:55-10:00	Discussion	
10:00-10:30	TEA	
SESSION 2	**CHAIRMAN: DR JJ VAN WINGERDEN**	
10:30-10:40	The Arterial Physiology of the Forearm following Radial Forearm Flap	Drs S Simango, M Daya, Prof A Madaree
10:40-10:55	Fascial Flaps in Hand Surgery	Prof W Morrison
10:55-11:05	Discussion	
11:05-11:20	Prefabricated Flaps and Tissue Engineering	Prof W Morrison
11:20-11:30	Discussion	
11:30-11:40	Carpal Tunnel Release combined with Epineural Neurolysis and Synovectomy	Dr A Barrow, Prof SL Biddulph
11:40-11:45	Discussion	
11:45-11:55	The Role of Synovial Fluid in Bone Healing	Prof SL Biddulph
11:55-12:00	Discussion	
12:00-13:00	LUNCH	

SESSION 3	**CHAIRMAN: DR T LE ROUX**	
13:00-13:10	Dear Therapist ←-------→ Dear Doctor	Ms L Pringle
13:10-13:15	Discussion	
13:15-13:25	Abrasion Injuries of the Hand and Forearm in Motor Vehicle Accidents	Drs P McGarr, M Daya, Prof A Maaaree
13:25-13:30	Discussion	
13:30-13:40	The Importance of Biomechanical and Activity Analysis in the Treatment of Arthritis - A Case Study	Mrs L Dawe, Ms K Weskamp
13:40-13:45	Discussion	
13:45-13:55	The effects of Electrotherapy on Wound Healing and Pain in Hand Injuries	Mrs N Nel
13:55-14:00	Discussion	
SESSION 4a	**CHAIRMEN: PROF SL BIDDULPH, DR J FLEMING**	
14:00-14:30	X-rays and problems	
14:30-15:00	TEA	
SESSION 4b	CHAIRMEN: PROF SL BIDDULPH, DR J FLEMING continued	
15:00-15:30	X-rays, problems and 5 minute presentations	
15:45-17 00	Annual General Meeting	
18:30	Bus departs from Hotel to Harbour	
19:00-22:00	Harbour Cruise and Dinner	

INSTRUCTIONAL COURSE
SUNDAY 10 SEPTEMBER 2000

07:30-08:00	Registration	
SESSION 5	CHAIRMAN: PROF U MENNEN	
08:00-08:30	Thumb Function and Reconstruction	Prof W Morrison
08:30-08 40	Discussion	
08:40-09:00	Wrap Around Techniques	Prof W Morrison
09:00-09:10	Discussion	
09:10-09:25	Anatomical Considerations in the Treatment of CMC Arthritis on the Thumb	Prof NGJ Maritz
09:25-09:30	Discussion	
09:30-09:40	Early Treatment of OA of the CMC Joint - A new Approach	Dr J Fleming
09:40-09:45	Discussion	
09:45-10:15	TEA	

SESSION 6	**CHAIRMAN: DR M CARIDES**	
10:15-10:30	Vascularised Tendon Grafts	Prof W Morrison
10:30-10:40	Discussion	
10:40-11:00	Nerve Repair and Regeneration including Nerve Growth Factors	Prof W Morrison
11:00-11:10	Discussion	
11:10-11:25	The Place for Neurotisation in Brachial Plexus Injuries	Dr ME Senoge, Dr E Bowen-Jones
11:25-11:30	Discussion	
11:30-12:15	AC Boonzaier Lecture	Prof KS Naidoo
5-13:15	LUNCH	
SESSION 7	**CHARMAN: DR ME SENOGE**	
13:15-13:30	Tendon Transfers in a 3-year old Child with Tetraplegia	Dr LT de Jager, Ms K Weskamp
13:30-13:35	Discussion	
13:35-13:55	The Metacarpal Hand	Prof W Morrison
13:55-14:05	Discussion	
14:05-14:20	Winging of the Scapula – Correction by Pectoralis Major Transfer	Prof U Mennen
14:20-14:25	Discussion	
14:25-14:45	Ischaemia Reperfusion Injury in the Limb	Prof W Morrison
14:45-14:55	Discussion	
SESSION 8	**CHAIRMAN: DR WMM MORRIS**	
14:55-15:40	Panel Discussion: Finger Tip Injury Panel	Proff W Morrison, S Biddulph, U Mennen Dr J van Wingerden, Mrs N Naidoo
'0-15:45	Closure by Dr LT de Jager	

SUMMARIES OF PAPERS

1. DUPUYTREN'S DISEASE IN BLACK PATIENTS

S Simango, M Daya, A Madaree, KS Naidoo

Despite decades of scientific and clinical investigations of the aetiology, the tissue of origin of Dupuytren's contracture has remained unclear. It has become more acceptable now that multiple factors are at play in the aetiology and progression of this complex disease.

Dupuytren's disease has been compared to benign fibromatoses, neoplasm recently, granulation tissue.

The general literature, would suggest that although this disease is common in the white population, it is rare in the African population.

We present our experience with Dupuytren's disease in African patients.

2. DUPUYTREN'S DISEASE AND DIABETES

A Barrow, S Biddulph

AIMS OF STUDY

A link between Dupuytren's disease and diabetes is generally accepted. The aim of this study was to prove the increased incidence of Dupuytren's in diabetics, as well as to further investigate the nature of the lesion, the progression, the site of involvement and the severity of the condition.

METHOD

A comparative prospective study of 50 adult diabetics and 50 non-diabetic adults as controls was carried out. The patients were all assessed clinically by the s two observers. The site of involvement, the severity of contracture and resultant deformity were noted in all affected cases.

RESULTS

A definite increase in incidence of Dupuytren's disease was noted in the diabetic population as compared with the non-diabetic controls (1/3). The disease appeared less progressive in nature. The patients with Insulin dependant diabetes were more severely affected than those with non-insulin dependant diabetes. A correlation between the severity of hand deformity and age, duration of disease and evidence of microangiopathy was demonstrated.

CONCLUSION

In conclusion, it appears that Dupuytren's disease does occur with increased incidence in diabetic patients. However, the disease appears to be of a less progressive and less severe form than normal. It may be postulated that the increased incidence and correlation of severity with IDDM may further implicate an ischaemic aetiology behind this condition.

? TWO-STAGE FLEXOR TENDON GRAFTS - IS IT A VIABLE OPTION?

M Solomons, R Endenburg

We present a retrospective review of clinical records of twenty patients over a seven year period, who had two-stage flexor tendon grafts and were followed up for an adequate period of time post operatively.

In order to be included in this study, all patients had to have full passive range of motion pre-operatively. All patients had Zone II flexor tendon injuries where primary repair was not possible due to either sepsis of delayed presentation of more than one month. All patients had a Hunter's silicone rod inserted as the first stage, followed by three months of passive mobilization. As the second stage procedure, most patients had palmaris longus grafts from the distal forearm to the flexor digitorum profundus insertion, using the adjacent flexor digitorum profundus muscle as a motor.

patients were followed up for an average of five months post operatively and the results were graded according to Kleinert's method of measuring the distance from the pulp to the distal palmar crease. Of the 20 patients reviewed 3 had an excellent result, 4 had a good result, 3 had a fair result and 10 had a poor result. Compared to results in the literature, these results compare unfavorably and we postulate that this is due to poor patient selection and is a commentary on the physiotherapy services available in the public sector.

4. MANAGEMENT OF P.I.P. FLEXION CONTRACTURES USING DIFFERENT SPLINTING METHODS

L Pringle

The aim of this study was to assess the different types of splinting and management techniques when correcting a P.I.P. contracture.

The following splints were used: Capener, Safety-pin, Joint-jack, p.o.p. casting, reverse knuckle bender, neoprene, finger pressure sleeves, 3 types of str figure of 8 dynamic. Each one was carefully assessed during and after application.

Application of any one or more of these are influenced by diagncsis, complications, activities of daily living of the patient and their compliance.

Definitions are clarified between a contracture and a fixed contracture. An assessment guideline was used to determine which was the appropriate splinting method and management (wearing time, removal for exercise, treatment time).

Of the 11 types of splints used, one was not suitable. Some patients required the use of two or more different types with good result.

A general guideline is shown indicating suggested type of splint according to assessment.

When managing a P.I.P. contracture, there is not only one type of splint to ., but with assessment the correct splint can be applied with excellent results.

5. END-TO-SIDE NERVE SUTURE FOR DELTOID RE-INNERVATION

U Mennen

End-to-side nerve suture is still in its infancy but has come to stay. Experience with over 50 clinical cases of various nerve injuries has produced exciting resul-s.

Previous attempts at re-innervation of motorizing the deltoid muscle have been very disappointing.

Mr T J v/d B (V020/99) a 28 year old left dominant Cafeteria Manager, sustained an axillary nerve injury from a shoulder dislocation in a motor vehicle accident on 2 December 1998.

On examination on 7 June 1999 the patient had no deltoid motor and sensory function. The electro-conduction test showed total nerve avulsion.

Since the patient started to develop shoulder pain and showed signs of subluxation it was decided to re-innervate the deltoid by N. axillaris end-to-side 'e suture to a suitable intact nerve in close proximity.

On 9 June 1999 a brachial plexus exploration was performed. The axillary nerve was found avulsed. Careful serial sections of the distal part were performed until normal nerve anatomy was seen with 2.5 loupe magnification. The closest normal intact nerve was the posterior cord. An end-to-side nerve suture was performed. Post-operatively the patient was given a collar-and-cuff sling for 2 weeks.

On 16 May 2000, i.e. 11 months post op, the deltoid muscle function returned with a Highet scale power of 4. The pre-op pain disappeared and no sign of shoulder subluxation was present. Shoulder mobility improved i.e. abduction and flexion.

In summary, ETSNS to re-innervate a paralyzed deltoid muscle is a viable option if an intact host nerve is available.

6. THE ARTERIAL PHYSIOLOGY OF THE FOREARM FOLLOWING RADIAL FOREARM FLAP

S Simango, M Daya, A Madaree

. . radial forearm flap is the reconstructive surgeon's workhorse. This reputation is partly due to the flap's purpoted low donor site morbidity. Arterial Doppler system is a non-invasive means of determining the blood flow of the superficial blood vessels.

In this study we used the arterial Doppler system to determine the blood flow of the hand after the radial forearm flap. The opposite hand was used as a control. We measured the diameter, velocity and calculated Reynold's number for the radial, ulnar and brachial arteries.

Analysis of the changes in the flow pattern will be presented.

7. CARPAL TUNNEL RELEASE COMBINED WITH EPINEURAL NEUROLYSIS AND SYNOVECTOMY

A Barrow, S Biddulph

AIMS

The carpal tunnel release is a very commonly performed surgical procedure. The results however, are often less than satisfactory. The aim of this study was to analyse the benefit versus potential morbidity of performing an epineural neurolysis and a flexor tendon synovectomy where required at the time of carpal tunnel release.

METHODS

A prospective study of 86 patients with carpal tunnel syndrome requiring surgery was performed. In 8 cases the condition was bilateral. There were 60 females and 26 males. The age, duration of symptoms, physical findings and histology were analysed. The patients all underwent a standard carpal tunnel release combined with an epineural neurolysis and a flexor tendon synovectomy. The post operative results were assessed clinically in the short term and by telephonic interview at between two and three years.

RESULTS

Of the 94 procedures performed there were two failures. This represents a 97,9% success rate. 80% of the patients returned to work within three weeks of surgery. One patient complicated with superficial wound sepsis (diabetic patient). There was no incidence of nerve injury, haematoma, tenodesis or RSD.

CONCLUSION

Synovectomy and neurolysis performed in conjunction with a standard carpal tunnel release does not increase morbidity or the complication rate. In comparison with other published series, the addition of these 2 procedures appear to have beneficial effects.

8. THE ROLE OF SYNOVIAL FLUID IN BONE HEALING

S Biddulph

An extensive computer search failed to reveal any research done on the effects of synovial fluid on osteosynthesis.

AIMS

A model using primates was designed to show if a unit of iliac crest bone consisting of 2 separate pieces of bone fixed together with steel wire placed within the supra-patellar pouch of the knee would undergo bony necrosis or show impeded bony union.

METHOD

Two units of bone were placed in each of the supra-patellar pouches of 5 fully c vn Chacma baboons. A control unit was placed submuscularly next to the iliac c. st. The bone was harvested at 2, 3 and 4 weeks after insertion.

RESULTS

Histological results showed that there was no difference in the rate of bony union in specimens totally bathed in synovial fluid and the submuscularly imbedded control specimen.

CONCLUSION

Synovial fluid does not impede the rate of bone healing. In fact, it may augment it. The irrigation of large bone grafts in areas with poor blood supply with a synovial fluid substitute may nourish such bone grafted material and help survival.

9. DEAR THERAPIST ←-----→ DEAR DOCTOR

L Pringle

At times there is confusion and misunderstanding when a patient is referred to a t apist for treatment of a hand condition and can result in mismanagement of our patients.

The aim of this study was to determine the most preferred terminology by therapists when receiving a referral - whether verbal at first of written. The extent of information needed by the therapist. The second aim was to determine what the surgeon's needs were regarding feed-back from the therapist.

Using the method of obtaining example referrals and progress reports as well as verbal information, interesting results will be shown.

In conclusion it seems as if the age-old "communication" is vital. Using information obtained, basic model referrals and progress reports will be shown and a summary of importance (if any) of factors such as experience of the therapist/surgeon, patient compliance, proximity of these team members.

10. ABRASION INJURIES OF THE HAND AND FOREARM IN MOTOR VEHICLE ACCIDENTS

P McGarr, M Daya, A Madaree

INTRODUCTION

The injury profile of a patient in a motor vehicle accident is dependent on various factors. These include speed, vehicle type, person factors and road conditions. In the recent past, we have seen several deep abrasion injuries of the upper limb. These injuries have a maximal impact in areas with minimal soft tissue cover like the dorsum of hand, wrist and elbow. In these areas there is a potential for tendon loss, nerve loss, bone loss and joint disruption. Management efforts are directed at initial debridement, preservation of vital tissue and functional rehabilitation.

MATERIAL AND METHODS

An audit of these injuries will include:

- Mechanism and distribution of injuries
- Emergency treatment and skeletal stabilization
- Timing and modalities of reconstruction
- A functional restoration

RESULTS

Results pertaining to the above will be presented.

11. THE IMPORTANCE OF BIOMECHANICAL AND ACTIVITY ANALYSIS IN THE TREATMENT OF ARTHRITIS: A CASE STUDY

L Dawe, K Weskamp

Function relates to being, doing and becoming. Humans are similar by nature but everyone has a unique and individual manner of functioning.

The role of the therapist in the maintenance and restoration of upper limb function depends upon the knowledge and understanding of the bio- and pathomechanics of joints and soft tissue and in-depth knowledge, understanding and appreciation of function.

In this paper the link between anatomical structures, pathology and function of the upper limb was explored. Activity analysis was used to gain deeper understanding of the bio- and pathomechanics of the hand and the implications on handedness.

.erstanding three concepts enables the therapist to provide user specific and excellent rehabilitation taking into consideration the uniqueness of the individual.

As the decision of "what surgery" to perform is so crucial a team approach offering a deeper insight into the functioning of the patient can be invaluable in assisting the making of this decision.

12. THE EFFECTS OF ELECTROTHERAPY ON WOUND HEALING AND PAIN IN HAND INJURIES

N Naidoo

PURPOSE

Wound healing is traditionally done by nursing staff, essentially including wound lavage and dressings. However, physiotherapists frequently treat patients with open wounds. The purpose of this study was to investigate the rate of wound healing and pain relief in patients with open wounds of the hand having physiotherapy treatment modalities and wound dressings.

HOD

125 patients with open wounds on the volar aspect of the hand were included in the study. Patients were assessed for zone of injury (I-V) with 5 patients per zone for all groups. Wounds were exposed and soaked in a warm saline bath for 10 - 15 minutes with active exercises. Patients then received either pulsed shortwave therapy, infrared radiation, laser or ultraviolet radiation. All patients received a neutral dressing of Jelonet and gauze, with the control group receiving mobilisation exercises and dressings. Patients were treated either daily or three times a week for 5 - 8 weeks, or until the wounds were healed. Wounds were measured for rate of healing by serial tracing and photography. Pain was measured using the numerical rating scale.

RESULTS

All groups showed increased wound healing. Groups treated with pulsed shortwave therapy and ultraviolet radiation showed increased rate of wound healing compared to those in the infrared, laser and control groups. In addition to the increased wound healing, patients treated with pulsed shortwave therapy showed significant improvement in pain.

CONCLUSION

The rate of healing and pain relief of open wounds in the hand is accelerated with physiotherapy treatment. All groups showed an increase in wound healing rate and had decreased pain. Patients treated with pulsed shortwave therapy yielded the most rapid wound healing rate and had the best pain response. Patients thus returned earlier to daily activities and employment.

13. ANATOMICAL CONSIDERATIONS IN THE TREATMENT OF CMC ARTHRITIS OF THE THUMB

NGJ Maritz

AIMS

1. To describe the influence of the insertion of abductor pollicis longus at the base of metacarpal I on the outcome of surgery for CMC arthritis of the thumb
2. To study the influence of hyperextension of the MP joint of the thumb on CMC surgery, and ways to prevent it.

MATERIAL AND METHOD

In 23 patients, over a period of 5 years, trapezium excision was done. The problem of the insertion of abductor pollicis longus and hyperextension of the MP joint was observed and addressed during surgery. Surgical technique will be described.

COMMENTS

1. Abductor pollicis longus gives pure abduction. What really is needed, is a position between abduction and extension.
2. Hyper-extension of the MP-joint should be addressed, otherwise an adduction deformity of the metacarpal may recur.

CONCLUSION

Excision arthroplasty of the CMC joint is an excellent operation. However, attention should be paid to detail.

14. EARLY TREATMENT OF OSTEOARTHRITIS OF THE CARPO-METACARPAL JOINT

J Fleming

We are all very experienced in treatment of the end stage of arthritis at the carpo-metacarpal joint. There is however considerable confusion and alternative plans for the early management of this condition.

Inspired by Dr E Zancolli, I developed a surgical decompression of the carpo-metacarpal joint by a tenotomy of part of the APL tendon. Or, if the patient is very lax, a tendon sling procedure reconstitutes the position of the metacarpal on the trapezium. For these procedures to work there should be no radiological changes. Accompanying these procedures a cortisone injection cools down the joint and a thumb splint is very effective for providing support to the base of the thumb.

15. THE PLACE FOR NEUROTISATION IN BRACHIAL PLEXUS INJURIES

ME Senoge, E Bowen-Jones

The traditional treatment of brachial plexus lesions has involved muscle/tendon transfers and arthrodesis. More recently neurotisation has increased in popularity. These procedures take many hours, the results are not guaranteed and there is a long wait before the final outcome.

A 20-year old male presented with a C5-6 brachial plexus avulsion injury requesting neurotisation in preference to the traditional Clark's transfer. Five months after his accident a neurotisation was performed. The clavicle was divided (and later plated). Part of the accessory nerve was joined to the suprascapular nerve. T3, 4 and 5 motor intercostal nerves were joined to the axillary nerve and those individual fascicles of the ulnar nerve which, when stimulated, flexed the little finger were joined to the musculo-cutaneous nerve.

Eighteen months after surgery he had a grade 3 power in the biceps and rotation of the shoulder and was still improving with the help of therapy. Encouraged by this success, 8 other neurotisation procedures have been subsequently carried out.

We recommend that neurotisation be performed in well motivated young people and that a team in each major centre learn to practise these techniques.

16. TENDON TRANSFERS IN A 3 YEAR OLD CHILD WITH TETRAPLEGIA

LT de Jager, K Weskamp

OBJECTIVE

Tendon transfers to improve hand function is rarely done in young children with tetraplegia. This case study illustrates hand function and the performance of activities of daily living before and after tendon transfer surgery in a 3 year old child with tetraplegia. The extensor carpi radialis longus was transferred to flexor digitorum profundus and brachioradialis to flexor pollicis longus.

METHODS

The patient had transverse myelitis at the age of 8 months. At the age of 3 years tendon transfers were performed on the right hand to achieve lateral pinch and grasp by transferring extensor carpi radialis longus to flexor digitorum profundus and brachioradiclis to flexor pollicis longus. The same transfer was performed to the left hand at age 4 years. Hand function and activities of daily living was recorded pre-operatively and post-operatively on video. Mu strength and joint range of movement was also recorded.

RESULTS

The hand function and activities of daily living results at one year after surgery will be presented in video format. The tendon transfers improved keypinch strength and grip strength. It made it possible for her to hold things one-handedly rather than between the palms of both hands. An interview with the parents described her increased independence after surgery. After surgery to the dominant hand the parents requested surgery to the non-dominant hand.

CONCLUSION

In young children tendon transfers to enhance hand function should be performed when the spinal cord injury has stabilised. The improved function and improved play is important for their development.

17. WINGING OF THE SCAPULA - CORRECTION BY PECTORALIS MAJOR TRANSFER

U Mennen

alysis of the serratus anterior muscle is very debilitating. Flexion of the snoulder, lifting and pushing objects is difficult or impossible. Furthermore, due to muscle imbalance and weakness the shoulder bio-mechanics are disturbed leading to undue strain on joint ligaments and capsules causing pain and discomfort.

Treatment methods to stabilize the scapula include scapula-vertebral fusion and scapula-thoracic fixation. These methods produce limitations of upper limb movements, are uncomfortable and have a high rate of failure.

Pectoralis major transfer to the inferior corner of the scapula results in restoration of near normal upper-arm function, relieve of pain, is cosmetically acceptable and has a very low morbidity.

ADDRESS LIST OF SPEAKERS
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